

=> FILE REG

FILE 'REGISTRY' ENTERED ON 18 APR 2008  
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=> DISPLAY HISTORY FULL L1-

FILE 'HCA' ENTERED ON 18 APR 2008

L1 287479 SEA CURE# OR CURING# OR CURAB? OR PHOTOCUR?  
L2 58130 SEA RADICAL?(3A) (POLYM? OR COPOLYM? OR HOMOPOLYM? OR  
TERPOLYM? OR RESIN?)  
L3 915713 SEA PLASMA#

FILE 'LREGISTRY' ENTERED ON 18 APR 2008

L4 STR  
L5 STR  
L6 STR  
L7 STR  
L8 STR  
L9 0 SEA SSS FUL L8

FILE 'REGISTRY' ENTERED ON 18 APR 2008

L10 9 SEA SSS SAM L8  
D L10 9 RSD  
E 333.845.1/RID  
L11 1336 SEA 333.845.1/RID  
L12 9 SEA SSS SAM L4

FILE 'LREGISTRY' ENTERED ON 18 APR 2008

L13 STR

FILE 'REGISTRY' ENTERED ON 18 APR 2008

L14 50 SEA SSS SAM L13  
L15 SCR 1840  
L16 50 SEA SSS SAM L13 NOT L15  
L17 325760 SEA SSS FUL L13 NOT L15  
L18 50 SEA SUB=L17 SSS SAM L4  
L19 3511 SEA SUB=L17 SSS FUL L4  
SAV L19 DAH578/A  
L20 14 SEA SUB=L17 SSS SAM L5  
L21 426 SEA SUB=L17 SSS FUL L5  
SAV L21 DAH578A/A

L22 FILE 'LREGISTRY' ENTERED ON 18 APR 2008  
STR

L23 FILE 'REGISTRY' ENTERED ON 18 APR 2008  
50 SEA SUB=L17 SSS SAM L22  
L24 31806 SEA SUB=L17 SSS FUL L22  
SAV TEM L24 DAH578B/A  
L25 6 SEA SUB=L17 SSS SAM L6  
L26 96 SEA SUB=L17 SSS FUL L6  
SAV L26 DAH578C/A  
E DIPHENYL IODIDE/CN  
E DIPHENYLIODIDE/CN

FILE 'LREGISTRY' ENTERED ON 18 APR 2008  
E DIPHENYLIODINIUM  
L27 1 SEA DIPHENYLIODINIUM/BI  
D RN

FILE 'REGISTRY' ENTERED ON 18 APR 2008  
L28 347 SEA 10182-84-0/CRN  
E DIPHENYLIODINE/CN  
L29 1 SEA DIPHENYLIODINE/CN  
L30 348 SEA L28 OR L29  
E TRIPHENYLSULFONIUM/CN  
L31 1 SEA TRIPHENYLSULFONIUM/CN  
D RN  
L32 806 SEA 18393-55-0/CRN  
L33 807 SEA L31 OR L32  
E DIPHENYLIODINIUM/CN  
L34 1 SEA DIPHENYLIODONIUM/CN  
L35 348 SEA L34 OR L28  
L36 50 SEA SSS SAM L7  
L37 4787 SEA SSS FUL L7  
SAV L37 DAH578D/A  
L38 4605 SEA L37 NOT PMS/CI

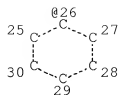
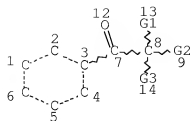
FILE 'HCA' ENTERED ON 18 APR 2008  
L39 6958 SEA L19  
L40 962 SEA L21  
L41 61461 SEA L24  
L42 50 SEA L26  
L43 2791 SEA L35  
L44 4017 SEA L33  
L45 3525 SEA L38  
L46 169 SEA L11  
L47 3072 SEA L1 AND L3  
L48 34 SEA L47 AND L39

L49 2 SEA L48 AND L2  
 L50 4 SEA L48 AND RADICAL?  
 L51 QUE ETHYLENIC? OR ?ACRYLAT? OR ?ACRYLIC? OR VINYL## OR  
 POLYVINYL##  
 L52 30 SEA L48 AND L51  
 L53 1111853 SEA (MIXT# OR MIXTURE? OR BLEND? OR ADMIX? OR COMMIX? OR  
 IMMIX? OR INTERMIX? OR COMPOSIT? OR COMPN# OR COMPSN# OR  
 FORMULAT? OR INTERSPER?)/TI  
 L54 8 SEA L52 AND L53  
 L55 18540 SEA (3D OR (3 OR THREE?)(2A)(D OR DIMENSION?))(3A)(MATRIX  
 ? OR MATRICE? OR LATTIC? OR SUBSTRAT? OR SURFACE? OR  
 BASE# OR SUBSTRUCT? OR UNDERSTRUCT? OR UNDERLAY? OR  
 FOUNDATION? OR PANE? OR DISK? OR DISC# OR WAFER?)  
 L56 1 SEA L48 AND L55  
 L57 34394 SEA (ARC OR ARCS OR ARCED OR ARCING# OR SPARK? OR  
 GLOW?)(2A)DISCHARG?  
 L58 234 SEA L1 AND L57  
 L59 1 SEA L58 AND L39  
 L60 12 SEA L49 OR L50 OR L54 OR L56 OR L59  
 L61 19 SEA L52 NOT L60  
 L62 5 SEA 1840-2002/PY,PRY,AY AND L60  
 L63 10 SEA 1840-2002/PY,PRY,AY AND L61  
 L64 1 SEA ((L1 AND L3) OR L58) AND L40  
 L65 1 SEA 1840-2002/PY,PRY,AY AND L64  
 L66 20 SEA ((L1 AND L3) OR L58) AND L41  
 L67 14 SEA L66 AND (L2 OR L51)  
 L68 6 SEA L66 AND L53  
 L69 0 SEA L66 AND L55  
 L70 17 SEA L67 OR L68  
 L71 3 SEA L66 NOT L70  
 L72 13 SEA 1840-2002/PY,PRY,AY AND L70  
 L73 2 SEA 1840-2002/PY,PRY,AY AND L71  
 L74 15 SEA L72 OR L73  
 L75 0 SEA ((L1 AND L3) OR L58) AND L42  
 L76 10 SEA L1 AND L42  
 L77 0 SEA L76 AND (L3 OR L57)  
 L78 8 SEA L76 AND (L2 OR L51)  
 L79 1 SEA L76 AND L53  
 L80 0 SEA L76 AND L55  
 L81 10 SEA L76 OR L78 OR L79  
 L82 7 SEA 1840-2002/PY,PRY,AY AND L81  
 L83 2 SEA ((L1 AND L3) OR L58) AND L43  
 L84 359 SEA L1 AND L43  
 L85 2 SEA L84 AND (L3 OR L57)  
 L86 182 SEA L84 AND (L2 OR L51)  
 L87 177 SEA L84 AND L53  
 L88 0 SEA L84 AND L55

L89	2	SEA L83 OR L85
L90	2	SEA 1840-2002/PY,PRY,AY AND L89
L91	2	SEA ((L1 AND L3) OR L58) AND L44
L92	460	SEA L1 AND L44
L93	2	SEA L92 AND (L3 OR L57)
L94	221	SEA L92 AND (L2 OR L51)
L95	234	SEA L92 AND L53
L96	2	SEA L92 AND L55
L97	42	SEA L92 AND L2
L98	26	SEA L97 AND L53
L99	48	SEA L84 AND L2
L100	26	SEA L99 AND L53
L101	25	SEA L100 NOT L90
L102	19	SEA 1840-2002/PY,PRY,AY AND L101
L103	4	SEA L91 OR L96
L104	25	SEA L98 NOT L103
L105	4	SEA 1840-2002/PY,PRY,AY AND L103
L106	22	SEA 1840-2002/PY,PRY,AY AND L104
L107	2	SEA ((L1 AND L3) OR L58) AND L45
L108	50	SEA L1 AND L45
L109	2	SEA L108 AND (L3 OR L57)
L110	17	SEA L108 AND (L2 OR L51)
L111	4	SEA L108 AND L2
L112	9	SEA L110 AND L53
L113	0	SEA L110 AND L55
L114	13	SEA L107 OR L109 OR L111 OR L112
L115	5	SEA L110 NOT L114
L116	6	SEA 1840-2002/PY,PRY,AY AND L114
L117	3	SEA 1840-2002/PY,PRY,AY AND L115
L118	9	SEA L116 OR L117
L119	2	SEA ((L1 AND L3) OR L58) AND L46
L120	6	SEA L1 AND L46
L121	6	SEA L119 OR L120
L122	3	SEA 1840-2002/PY,PRY,AY AND L121

FILE 'REGISTRY' ENTERED ON 18 APR 2008

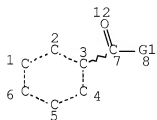
=> D L19 QUE STAT  
L4 STR



VAR G1=C/15  
 VAR G2=26/O/N  
 VAR G3=C/15/26/O/N  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE  
 L13 STR



C @11

VAR G1=11/P  
 NODE ATTRIBUTES:  
 NSPEC IS RC AT 11  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 10

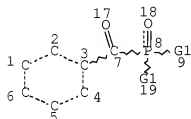
STEREO ATTRIBUTES: NONE  
 L15 SCR 1840  
 L17 325760 SEA FILE=REGISTRY SSS FUL L13 NOT L15

L19 3511 SEA FILE=REGISTRY SUB=L17 SSS FUL L4

100.0% PROCESSED 58887 ITERATIONS  
SEARCH TIME: 00.00.01

3511 ANSWERS

=> D L21 QUE STAT  
L5 STR

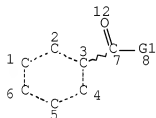


C @20

VAR G1=13/20  
NODE ATTRIBUTES:  
NSPEC IS RC AT 14  
NSPEC IS RC AT 20  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RSPEC I  
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE  
L13 STR



C @11

VAR G1=11/P  
NODE ATTRIBUTES:  
NSPEC IS RC AT 11  
DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L15 SCR 1840

L17 325760 SEA FILE=REGISTRY SSS FUL L13 NOT L15

L21 426 SEA FILE=REGISTRY SUB=L17 SSS FUL L5

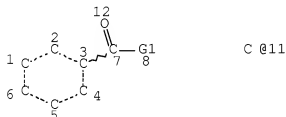
100.0% PROCESSED 632 ITERATIONS

426 ANSWERS

SEARCH TIME: 00.00.01

=> D L24 QUE STAT

L13 STR



VAR G1=11/P

NODE ATTRIBUTES:

NSPEC IS RC AT 11

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

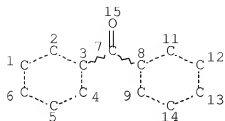
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L15 SCR 1840

L17 325760 SEA FILE=REGISTRY SSS FUL L13 NOT L15

L22 STR



NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

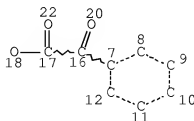
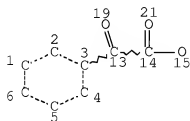
GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE  
 L24 31806 SEA FILE=REGISTRY SUB=L17 SSS FUL L22

100.0% PROCESSED 44862 ITERATIONS  
 SEARCH TIME: 00.00.01

31806 ANSWERS

=> D L26 QUE STAT  
 L6 STR

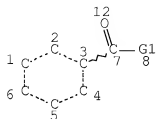


NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 22



STEREO ATTRIBUTES: NONE  
L13 STR



C @11

VAR G1=11/P  
NODE ATTRIBUTES:  
NSPEC IS RC AT 11  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

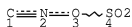
GRAPH ATTRIBUTES:  
RSPEC I  
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE  
L15 SCR 1840  
L17 325760 SEA FILE=REGISTRY SSS FUL L13 NOT L15  
L26 96 SEA FILE=REGISTRY SUB=L17 SSS FUL L6

100.0% PROCESSED 1227 ITERATIONS  
SEARCH TIME: 00.00.01

96 ANSWERS

=> D L37 QUE STAT  
L7 STR



NODE ATTRIBUTES:  
NSPEC IS RC AT 1  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 4

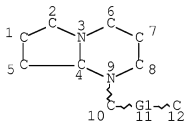
STEREO ATTRIBUTES: NONE  
L37 4787 SEA FILE=REGISTRY SSS FUL L7

100.0% PROCESSED 5374 ITERATIONS  
SEARCH TIME: 00.00.01

4787 ANSWERS

=> D L8

L8 STR



REP G1=(0-1) C  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

=> FILE HCA

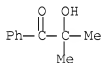
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FORMULA (I)

=> D L62 1-5 BIB ABS HITSTR HITIND

L62 ANSWER 1 OF 5 HCA COPYRIGHT 2008 ACS on STN  
AN 141:124070 HCA Full-text  
TI Energy efficient UV curing  
AU Wright, Robin E.  
CS 3M, USA  
SO Technical Conference Proceedings - RadTech 2002: The Premier UV/EB  
Conference & Exhibition, Indianapolis, IN, United States, Apr.  
28-May 1, 2002 (2002), 363-372 Publisher: RadTech  
International North America, Chevy Chase, Md.  
CODEN: 69ETHJ  
DT Conference  
LA English  
AB UV curing is touted as a "Green Technol." yet wide web prodn.  
facilities contg. multiple rows of high intensity UV lamps still  
consume enormous amts. of energy. In many cases, a crit. evaluation  
of both the chem. and the initiator package that make up a coating  
can suggest much more energy efficient solns. without changing the  
performance properties of the final product. This optimized soln. is  
usually considerably cheaper from a capital equipment perspective as  
well. Anal. of an industrially important UV curing process is  
presented and the efficiency of conventional high intensity UV  
sources analyzed. An optimized UV cure process is then described and  
compared to the more traditional process.  
IT 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one  
(photo initiator; energy-efficient UV curing of thin  
silicone acrylate release coatings using germicidal lamps)  
RN 7473-98-5 HCA  
CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl- (CA INDEX NAME)



CC 35-8 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 42  
ST UV curing silicone acrylate release coating; germicidal

lamp curing silicone acrylate release coating

IT Polysiloxanes, reactions  
(acrylates; energy-efficient UV curing of thin silicone acrylate release coatings using germicidal lamps)

IT Electric discharge lamps  
(arc, low-pressure, mercury; energy-efficient UV curing of thin silicone acrylate release coatings using germicidal lamps)

IT Coating process  
Release coatings  
(energy-efficient UV curing of thin silicone acrylate release coatings using germicidal lamps)

IT UV lamps  
(germicidal; energy-efficient UV curing of thin silicone acrylate release coatings using germicidal lamps)

IT Crosslinking catalysts  
(photochem., arom. ketone; energy-efficient UV curing of thin silicone acrylate release coatings using germicidal lamps)

IT Crosslinking  
(photochem.; energy-efficient UV curing of thin silicone acrylate release coatings using germicidal lamps)

IT 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one  
(photo initiator; energy-efficient UV curing of thin silicone acrylate release coatings using germicidal lamps)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 2 OF 5 HCA COPYRIGHT 2008 ACS on STN

AN 140:225897 HCA Full-text

TI Photosensitive electrically insulating resin composition,  
photosensitive electrically insulating film, and photosensitive  
electrically insulating material for plasma display panel

IN Fushida, Hitoshi; Oshio, Kiminori; Obitani, Hiroyuki

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.  
CODEN: JKXXAF

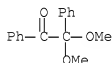
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	
	-----				
PI	JP 2004069755	A	20040304	JP 2002-224870	200208 01

JP 3947057 B2 20070718  
 PRAI JP 2002-224870 20020801 <--  
 OS MARPAT 140:225897  
 AB The photosensitive elec. insulating compn. contains (A) org. components contg. p-R2NC6H4-p-C(O)C6H4NR2 (R = Me, Et), a photopolymerizable monomer, a photopolymn. initiator, a water-sol. cellulose deriv., and an OH-contg. acrylic resin and (B) an inorg. powder, preferably powd. glass. The film is made of a support and the photosensitive elec. insulating compn. layer. The compn. is used as barrier ribs, etc., formed by photolithog. in a plasma display panel. The compn. layer shows high photocurability even if the thickness of the layer is high.  
 IT 24650-42-8, IR 651  
 (IR 651, photopolymn. initiator; in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)  
 RN 24650-42-8 HCA  
 CN Ethanone, 2,2-dimethoxy-1,2-diphenyl- (CA INDEX NAME)



IC ICM G03F007-004  
 ICS C08F002-44; C08F291-00; G03F007-032; G03F007-033; H01J011-02  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38, 57, 76  
 ST photosensitive elec insulating resin compn photolithog;  
 plasma display panel photosensitive elec insulator  
 IT Glass powders  
 (in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)  
 IT Electric insulators  
 Photoimaging materials  
 Photolithography  
 Plasma display panels  
 (photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)  
 IT 68406-95-1, HO-MPP  
 (HO-MPP; in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)  
 IT 24650-42-8, IR 651

(IR 651, photopolymn. initiator; in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)

- IT 9004-64-2, Hydroxypropyl cellulose 26010-51-5, 2-Hydroxyethyl methacrylate-styrene copolymer  
(in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)
- IT 90-93-7, 4,4'-Bisdiethylaminobenzophenone  
(polymn. accelerator; in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)

L62 ANSWER 3 OF 5 HCA COPYRIGHT 2008 ACS on STN

AN 139:324798 HCA Full-text

TI Curing of surface coatings containing radiation-curable composition via plasma

IN Misev, Ljubomir; Valet, Andreas; Simmendinger, Peter; Jung, Tunja

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO PCT Int. Appl., 76 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2003089479	A2	20031030	WO 2003-EP4036	20030417
				<--	
	WO 2003089479	A3	20040916		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2482470	A1	20031030	CA 2003-2482470	20030417
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	AU 2003227644	A1	20031103	AU 2003-227644	

					200304 17
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EP 1497338	A2	20050119	EP 2003-725054		200304 17
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	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
BR 2003009389	A	20050419	BR 2003-9389		200304 17
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CN 1646572	A	20050727	CN 2003-808766		200304 17
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JP 2005523803	T	20050811	JP 2003-586198		200304 17
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ZA 2004007710	A	20060628	ZA 2004-7710		200409 23
				<--	
MX 2004PA09790	A	20041213	MX 2004-PA9790		200410 07
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US 20050129859	A1	20050616	US 2004-511578		200410 13
				<--	
IN 2004CN02602	A	20070720	IN 2004-CN2602		200411 19
				<--	
PRAI	EP 2002-8254	A	20020419	<--	
	WO 2003-EP4036	W	20030417		
OS	MARPAT 139:324798				
AB	Title coating consists of (A) at least one free radical- polymerizable compd. or (B) at least one compd. that, under the action of an acid, is able to enter into a polymn., polycondensation or polyaddn. reaction, or (C) at least one compd. that, under the action of a base, is able to enter into a polymn., polycondensation or polyaddn. reaction, or a mixt. of components (A) and (B), or a				

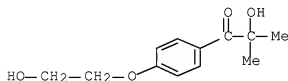
mixt. of components (A) and (C); and (D) at least one photolabile compd. that is activatable by plasma discharge. Thus, a radiation-curable formulation is prepd. by mixing Ebecryl 604 89.0, Sartomer SR 344 10.0, Ebecryl 350 1.0, and Irgacure 184 2.0 parts. The compn. is applied to a three-dimensional substrate and the curing is carried out in a plasma discharge chamber.

IT 106797-53-9, Irgacure 2959

(photoinitiator; curing of surface coatings contg.  
radiation-curable compn. via plasma)

RN 106797-53-9 HCA

CN 1-Propanone, 2-hydroxy-1-[4-(2-hydroxyethoxy)phenyl]-2-methyl- (CA  
INDEX NAME)



IC ICM C08F002-52

ICS C08J007-04

CC 42-3 (Coatings, Inks, and Related Products)

ST curing coating induced plasma discharge chamber

IT Carbon black, uses

(SP 250 (carbon black); curing of surface coatings  
contg. radiation-curable compn. via plasma)

IT Polysiloxanes, uses

(acrylates, Ebecryl 350, reaction products with Ebecryl  
604 and Sartomer SR 344; curing of surface coatings  
contg. radiation-curable compn. via plasma)

IT Epoxy resins, uses

Polyesters, uses

Polyurethanes, uses

(acrylic; curing of surface coatings contg.  
radiation-curable compn. via plasma)

IT Light stabilizers

UV stabilizers

(curing of surface coatings contg. radiation-  
curable compn. via plasma)

IT Polyethers, uses

(di-Me siloxane-, Byk 306, flow improver; curing of  
surface coatings contg. radiation-curable compn. via  
plasma)

IT Polysiloxanes, uses



- (di-Me, polyether-, Byk 306, flow improver; curing of surface coatings contg. radiation-curable compn. via plasma)
- IT Polymerization catalysts  
(photochem., radical; curing of surface coatings contg. radiation-curable compn. via plasma)
- IT Acrylic polymers, uses  
(polyurethane-; curing of surface coatings contg. radiation-curable compn. via plasma)
- IT Coating materials  
(powder; curing of surface coatings induced by plasma in plasma discharge chamber)
- IT Coating materials  
(radiation-curable; curing of surface coatings induced by plasma in plasma discharge chamber)
- IT Plasma  
(surface coatings by curing polymerizable compns. using plasma)
- IT 41556-26-7, Tinuvin 292 192662-79-6, Tinuvin 400  
(UV absorber; curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 26570-48-9DP, Sartomer SR 344, reaction products with Ebecryl 604 and Ebecryl 350 79586-46-2DP, Ebecryl 604, reaction products with Sartomer SR 344 and Ebecryl 350 141525-43-1P, Ebecryl 830-hexanediol diacrylate-trimethylolpropane triacrylate copolymer 211190-80-6P, 4-Hydroxybutyl acrylate-isophorone diisocyanate copolymer 211190-81-7P, Diethyl malonate-1,5-pentanediol copolymer 211190-82-8P, Diethyl malonate-4-hydroxybutyl acrylate-isophorone diisocyanate-1,5-pentanediol copolymer 211254-29-4P 344585-10-0P, Araldite GY 250-Grilonit Epoxide 8-Grilonit V 51-31 copolymer 615286-38-9P, AralditeCy 179-dipropylene glycol-Tone 0301 copolymer 615286-39-0P, Ebecryl 284-Roskydal UA-VP-LS 2308 copolymer 615286-40-3P, Desmophen A 870-Desmophen VP-LS 2089-Roskydal UA-VP-LS 2337 copolymer  
(curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 147-14-8, Irgalite Blue BSP 461426-90-4, Kronos 2310  
(curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 403479-94-7, Uvecoat 3000  
(curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 615288-42-1, Worlee Add 902  
(degassing agent; curing of surface coatings contg.

radiation-curable compn. via plasma)

IT 7631-86-9, Silica, uses 72283-68-2, Resiflow PV 5  
(flow improver; curing of surface coatings contg.  
radiation-curable compn. via plasma)

IT 947-19-3, Irgacure 184 5495-84-1, Quantacure ITX 121239-75-6,  
4-Octyloxyphenylphenyliodonium hexafluoroantimonate 344562-80-7,  
4-Isobutylphenyl-p-tolyliodonium hexafluorophosphate  
(free radical initiators; curing of surface  
coatings contg. radiation-curable compn. via  
plasma)

IT 106797-53-9, Irgacure 2959 880000-86-2, Irgacure 2020  
(photoinitiator; curing of surface coatings contg.  
radiation-curable compn. via plasma)

IT 162881-26-7, Irgacure 819  
(photoinitiator; curing of surface coatings contg.  
radiation-curable compn. via plasma)

IT 458568-52-0  
(photolatent base; curing of surface coatings contg.  
radiation-curable compn. via plasma)

L62 ANSWER 4 OF 5 HCA COPYRIGHT 2008 ACS on STN  
AN 135:168055 HCA Full-text  
TI Production of surface coating on inorg. or org. substrate by  
plasma-activation  
IN Kunz, Martin; Bauer, Michael  
PA Ciba Specialty Chemicals Holding Inc., Switz.  
SO PCT Int. Appl., 42 pp.  
CODEN: PIXXD2

DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2001058971	A2	20010816	WO 2001-EP1113	200102 02

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WO 2001058971 A3 20020207

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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,  
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ,  
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ,  
UA, UG, US, UZ, VN, YU, ZA, ZW

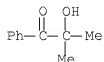
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	TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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EP	1255616	A2	20021113	EP	2001-915186
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US	20030129322	A1	20030710	US	2002-181008
					200207 11
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US	6733847	B2	20040511		
MX	2002PA07598	A	20021213	MX	2002-PA7598
					200208 07
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PRAI	CH 2000-254	A	20000208	<--	
	WO 2001-EP1113	W	20010202	<--	
OS	MARPAT 135:168055				
AB	The coatings on an inorg. or org. substrate is produced by (a) irrads. on the substrate with a low-temp. plasma discharge, a corona discharge, high-energy UV radiation or electron radiation, (b) application of electron- or H-donor contg. ethylenically unsatd. group to the substrate to react with the formed radicals, (C) coating a compn. comprising ≥1 ethylenically unsatd. monomer or oligomer with either a photoinitiator, followed by curing by electromagnetic and/or ionizing radiation, or a thermally activation initiator, followed by thermal curing. Thus, polyethylene film was irradiated with argon/O2 plasma, then 2-N-morpholinoethyl acrylate was introduced and a coating of 30 nm thickness was obtained, which was coated with an epoxy resin (Ebecryl 604 89%, SR 344 10% and Ebecryl 350 1%) and an photoinitiator 2% Darocur to give a coating with good adhesion.				
IT	7473-98-5, Darocur 1173 (catalyst; prodn. of surface coating on inorg. or org. substrate				

by plasma-activation)

RN 7473-98-5 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl- (CA INDEX NAME)



IC ICM C08G

CC 42-10 (Coatings, Inks, and Related Products)

ST plasma activation surface coating; morpholinoethyl  
acrylate precoat epoxy acrylate coating

IT Polysiloxanes, uses

(acrylic, polymers with epoxy acrylates and acrylates; prodn. of  
surface coating on inorg. or org. substrate by plasma  
-activation)

IT Polysiloxanes, uses

(epoxy-polyoxyalkylene-; prodn. of surface coating on inorg. or  
org. substrate by plasma-activation)

IT Polyoxyalkylenes, uses

(epoxy-siloxane-; prodn. of surface coating on inorg. or org.  
substrate by plasma-activation)

IT Crosslinking catalysts

(photochem.; prodn. of surface coating on inorg. or org.  
substrate by plasma-activation)

IT Coating materials

(photocurable; prodn. of surface coating on inorg. or  
org. substrate by plasma-activation)

IT Polymerization

(plasma; prodn. of surface coating on inorg. or org.  
substrate by plasma-activation)

IT Epoxy resins, uses

(polyoxyalkylene-siloxane-; prodn. of surface coating on inorg.  
or org. substrate by plasma-activation)

IT Acrylic polymers, preparation

(polysiloxane-, polymers with epoxy acrylates and acrylates;  
prodn. of surface coating on inorg. or org. substrate by  
plasma-activation)

IT 119-61-9, Benzophenone, uses 7473-98-5, Darocur 1173

22031-26-1 75081-21-9, Isopropylthioxanthone

(catalyst; prodn. of surface coating on inorg. or org. substrate  
by plasma-activation)

IT 148779-78-6P 354123-95-8P 354123-96-9P

(precoat; prodn. of surface coating on inorg. or org. substrate by plasma-activation)

IT 55972-47-9P 352711-58-1P 352711-59-2P  
(precoating; prodn. of surface coating on inorg. or org. substrate by plasma-activation)

IT 28902-82-1, Acryloylmorpholine polymer  
(prodn. of surface coating on inorg. or org. substrate by plasma-activation)

IT 26570-48-9DP, polymers with epoxy acrylates and acrylate-siloxanes  
79586-46-2DP, Ebecryl 604, polymers with acrylates and acrylate-siloxanes 354123-94-7P 354123-97-0P  
(prodn. of surface coating on inorg. or org. substrate by plasma-activation)

L62 ANSWER 5 OF 5 HCA COPYRIGHT 2008 ACS on STN  
AN 134:179620 HCA Full-text  
TI Ceramic pattern forming compositions and ceramic pattern formation  
IN Nakajima, Hiroyuki  
PA Nippon Synthetic Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2001048656	A	20010220	JP 1999-228082	199908 12

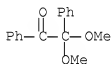
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PRAI JP 1999-228082 19990812 <--

AB The title comps. comprise (a) ceramic materials (e.g., Pb borosilicate, alumina, and TiO<sub>2</sub>), (b) unsatd. double bond-contg. curable resins (e.g., diallyl phthalate, cresol novolak epoxy acrylates), (c) thermopolymn. initiators (e.g., Irgacure 651, tert-butylperoxy benzoate), and optionally (d) silanes (e.g., KBM 403, A-174). The ceramic patterns, useful for liq. crystal display device, fluorescent display device, plasma display panel, etc., are prepd. by forming a photo-sensitive resin layer [e.g., Bu methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-Me methacrylate copolymer, tetraethylene glycol dimethacrylate, p,p'-bis(diethylamino)benzophenone, hexaallyl diimidazole, Leuco Crystal Violet, and Malachite Green in solvents] on a substrate (e.g., glass plate), forming a pattern by using a pattern mask, exposing to light,

and developing, filling the intaglio with the ceramic materials, and sintering to form a ceramic pattern.

- IT 24650-42-3, Irgacure 651  
(Irgacure 651, thermopolymer. initiators; ceramic pattern forming compns. and ceramic pattern formation)
- RN 24650-42-8 HCA
- CN Ethanone, 2,2-dimethoxy-1,2-diphenyl- (CA INDEX NAME)



- IC ICM C04B035-63  
ICS H01J009-02; H01J011-02
- CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 57, 74
- ST ceramic pattern formation plasma display panel; lead borosilicate alumina titania ceramic pattern compn; diallyl phthalate ceramic pattern compn; novolak epoxy acrylate ceramic pattern compn; thermopolymer initiator ceramic pattern compn
- IT Coupling agents  
Plasma display panels  
Sintering  
(ceramic pattern forming compns. and ceramic pattern formation)
- IT Phenolic resins, uses  
(epoxy, novolak, acrylates, cresol-based; ceramic pattern forming compns. and ceramic pattern formation)
- IT Epoxy resins, uses  
(phenolic, novolak, acrylates, cresol-based; ceramic pattern forming compns. and ceramic pattern formation)
- IT 24650-42-8, Irgacure 651  
(Irgacure 651, thermopolymer. initiators; ceramic pattern forming compns. and ceramic pattern formation)

=> D L63 1-10 TI

- L63 ANSWER 1 OF 10 HCA COPYRIGHT 2008 ACS on STN
- TI Plasma displays having two-layer black silver electrodes with high-accuracy fine patterns and manufacture of the electrodes
- L63 ANSWER 2 OF 10 HCA COPYRIGHT 2008 ACS on STN
- TI Method for forming functional layers on an inorganic or organic

substrate

- L63 ANSWER 3 OF 10 HCA COPYRIGHT 2008 ACS on STN  
TI Method for forming reactive coatings on inorganic or organic substrates
- L63 ANSWER 4 OF 10 HCA COPYRIGHT 2008 ACS on STN  
TI Flexible mold and method of manufacturing microstructure using the same
- L63 ANSWER 5 OF 10 HCA COPYRIGHT 2008 ACS on STN  
TI Process for the production of strongly adherent coatings by substrate surface treatment
- L63 ANSWER 6 OF 10 HCA COPYRIGHT 2008 ACS on STN  
TI Smart plasma priming - a new surface modification technology with superior interface features
- L63 ANSWER 7 OF 10 HCA COPYRIGHT 2008 ACS on STN  
TI Smart plasma Priming - a new surface modification technology with superior interface features
- L63 ANSWER 8 OF 10 HCA COPYRIGHT 2008 ACS on STN  
TI Superior adhesion with "smart priming" -new surface modification technology
- L63 ANSWER 9 OF 10 HCA COPYRIGHT 2008 ACS on STN  
TI Method for forming phosphor pattern for flat panel display such as plasma display panel
- L63 ANSWER 10 OF 10 HCA COPYRIGHT 2008 ACS on STN  
TI Resist pattern formation, formation of barrier rib of plasma display panels, and manufacture of plasma display panels

=> D L63 3,4,5,6,7,8 BIB ABS HITSTR HITIND

- L63 ANSWER 3 OF 10 HCA COPYRIGHT 2008 ACS on STN  
AN 141:90089 HCA Full-text  
TI Method for forming reactive coatings on inorganic or organic substrates  
IN Kunz, Martin; Bauer, Michael; Baranyai, Andreas  
PA Ciba Specialty Chemicals Holding Inc., Switz.  
SO PCT Int. Appl., 33 pp.  
CODEN: PIXXD2  
DT Patent  
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2004056910	A1	20040708	WO 2003-EP51010	200312 15
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AU	2003299237	A1	20040714	AU 2003-299237	200312 15
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EP	1576037	A1	20050921	EP 2003-799570	200312 15
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CN	1729237	A	20060201	CN 2003-80106811	200312 15
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JP	2006510774	T	20060330	JP 2004-561494	200312 15
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NZ 541175	A	20080229	NZ 2003-541175	200312 15
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ZA 2005004341	A	20060726	ZA 2005-4341	200505 27
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MX 2005PA06547	A	20050816	MX 2005-PA6547	200506 17
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IN 2005CN01662	A	20070831	IN 2005-CN1662	200507 20
			<--	
US 20060159856	A1	20060720	US 2006-538890	200603 01

			<--
PRAI DE 2002-10260336	A	20021220	<--
WO 2003-EP51010	W	20031215	

AB The invention is characterized in that (a) the inorg. or org. substrate is exposed to a low-temp. plasma, a corona discharge, an intense irradiation and/or a flame-treatment, (b) (1) at least one activatable initiator or (2) at least one activatable initiator and at least one ethylenically unsaturated compound in the form of melts, solutions, suspensions or emulsions is/are applied to the inorg. or org. substrate, whereby at least one group, which interacts with a subsequently applied coating as an adhesion promoter or reacts with groups contained in said coating, is incorporated into the activatable initiator and/or the ethylenically unsaturated compound, (c) the coated substrate is heated and/or irradiated with electromagnetic waves and an adhesion-promoter layer is formed, and (d) the substrate that has been pre-treated in this manner is provided with an additional coating containing reactive groups that react with the groups in the adhesion-promoter layer and/or that interact with said layer. Thus, treating a PVC plate with a 400-W corona discharge, coating the treated plate with an EtOH solution containing 0.3% p-(CH<sub>2</sub>:CHCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O)C<sub>6</sub>H<sub>4</sub>C(:O)CMe<sub>2</sub>OH and 0.7% 2-hydroxyethyl methacrylate, drying to remove the EtOH, and irradiating with 120-W/cm UV light gave a coated plate that exhibited better adhesion to aqueous polyvinyl acetate, polyvinyl alcohol, and starch adhesives than the untreated plate.

IT 716367-49-6P, 2-Hydroxyethyl methacrylate  
-2-[4-(2-Hydroxy-2-methylpropionyl)phenoxy]ethyl acrylate  
copolymer

(forming adhesion-promoting coatings on inorg. or org. substrates)

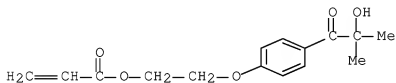
RN 716367-49-6 HCA

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2-[4-(2-hydroxy-2-methyl-1-oxopropyl)phenoxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 110430-09-6

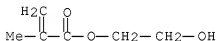
CMF C15 H18 O5



CM 2

CRN 868-77-9

CMF C6 H10 O3



IT 115055-20-4, 2-[4-(2-Hydroxy-2-methylpropionyl)phenoxy]ethyl acrylate homopolymer  
(forming adhesion-promoting coatings on inorg. or org. substrates)

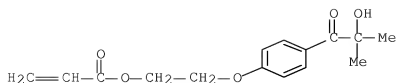
RN 115055-20-4 HCA

CN 2-Propenoic acid, 2-[4-(2-hydroxy-2-methyl-1-oxopropyl)phenoxy]ethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 110430-09-6

CMF C15 H18 O5



- IC ICM C08J007-16  
ICS B05D003-10
- CC 38-2 (Plastics Fabrication and Uses)  
Section cross-reference(s): 42
- ST reactive adhesion promoting coating corona discharge pretreatment;  
PVC plate adhesion promoting coating hydroxyethyl methacrylate copolymer; hydroxymethylpropionylphenoxyethyl acrylate copolymer adhesion promoting coating PVC plate; starch adhesive PVC plate adhesion promoting layer; alc polyvinyl adhesive PVC plate adhesion promoting layer; polyvinyl acetate adhesive PVC plate adhesion promoting layer
- IT Coating materials  
(UV-curable, top layers; forming adhesion-promoting coatings on inorg. or org. substrates)
- IT Coating materials  
(electron-beam-curable, top layers; forming adhesion-promoting coatings on inorg. or org. substrates)
- IT Electric corona  
Flame  
Plasma  
(substrate pretreatment; forming adhesion-promoting coatings on inorg. or org. substrates)
- IT 9002-89-5, Polyvinyl alcohol 9003-20-7,  
Polyvinyl acetate 9005-25-8, Starch, uses  
(adhesive top layer; forming adhesion-promoting coatings on inorg. or org. substrates)
- IT 716367-49-6P, 2-Hydroxyethyl methacrylate  
-2-[4-(2-Hydroxy-2-methylpropionyl)phenoxy]ethyl acrylate copolymer  
(forming adhesion-promoting coatings on inorg. or org. substrates)
- IT 115055-20-4, 2-[4-(2-Hydroxy-2-methylpropionyl)phenoxy]ethyl acrylate homopolymer  
(forming adhesion-promoting coatings on inorg. or org. substrates)
- IT 79-10-7D, Acrylic acid, esters, polymers 9002-86-2, PVC  
9003-53-6, Polystyrene 14808-60-7, Quartz, miscellaneous

25038-59-9, PETP, miscellaneous

(substrate; forming adhesion-promoting coatings on inorg. or org. substrates)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L63 ANSWER 4 OF 10 HCA COPYRIGHT 2008 ACS on STN

AN 140:95336 HCA Full-text

TI Flexible mold and method of manufacturing microstructure using the same

IN Yokoyama, Chikafumi; Yoda, Akira; Kikuchi, Hiroshi

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2004007166	A1	20040122	WO 2003-US18232	20030610

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

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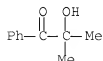
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EP 1519819                      B1      20071128  
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US 20050253290                      A1      20051117      US 2004-517644  
 200412  
 09

PRAI JP 2002-201539                      A      20020710      <--  
 WO 2003-US18232                      W      20030610  
 AB    To provide a flexible mold useful for manufg. a plasma display panel  
 (PDP) rib having a lattice pattern and other microstructures, and  
 capable of highly precisely manufg. the microstructures without  
 involving defects such as occurrence of bubbles and pattern  
 deformation. A flexible mold comprises a base layer made of a first  
 curable material having a viscosity of 3,000-100,000 cps at 10-80°  
 and a coating layer coating a surface of the base layer and made of a  
 second curable material having a viscosity of 200 cps or below at 10-  
 80°. Thus, a flexible mold was manufd. by coating one side of a PET  
 support film with a curable compn. contg. 20% 1,6-hexanediol  
 diacrylate, 80% Photomer 6010, and 1% Darocure 1173, and laminating  
 on a metal plate coated with a compn. contg. 60% 1,6-hexanediol  
 diacrylate, 40% Photomer 6010, and 1% Darocure 1173.  
 IT    7473-98-5  
       (curing catalyst; prodn. of flexible molds with groove  
       pattern for plasma display panels)  
 RN    7473-98-5    HCA  
 CN    1-Propanone, 2-hydroxy-2-methyl-1-phenyl-    (CA INDEX NAME)



IC    ICM    B29C033-42

ICS B29C033-40; H01J009-24  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 74  
 ST flexible mold microstructure plasma display panel  
 IT Polyurethanes, uses  
 (acrylic; prodn. of flexible molds with groove pattern  
 for plasma display panels)  
 IT Coating materials  
 (photocurable; prodn. of flexible molds with groove  
 pattern for plasma display panels)  
 IT Laminated plastic films  
 Plasma display panels  
 (prodn. of flexible molds with groove pattern for plasma  
 display panels)  
 IT Polyesters, miscellaneous  
 (substrate; prodn. of flexible molds with groove pattern for  
 plasma display panels)  
 IT 7473-98-5  
 (curing catalyst; prodn. of flexible molds with groove  
 pattern for plasma display panels)  
 IT 645403-13-0P, 1,6-Hexanediol diacrylate-Photomer 6010  
 copolymer  
 (prodn. of flexible molds with groove pattern for plasma  
 display panels)  
 IT 25038-59-9, PET polymer, miscellaneous  
 (substrate; prodn. of flexible molds with groove pattern for  
 plasma display panels)  
 RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L63 ANSWER 5 OF 10 HCA COPYRIGHT 2008 ACS on STN  
 AN 139:165900 HCA Full-text  
 TI Process for the production of strongly adherent coatings by  
 substrate surface treatment  
 IN Kunz, Martin; Bauer, Michael; Baranyai, Andreas; Macor, Giorgio  
 PA Ciba Spezialitaetenchemie Pforse GmbH, Germany  
 SO PCT Int. Appl., 57 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2003064061	A1	20030807	WO 2003-EP780	

200301  
 27

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W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2472063	A1	20030807	CA 2003-2472063		20030127
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EP 1472009	B1	20051228			
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BR 2003007285	A	20041228	BR 2003-7285		20030127
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CN 1622862	A	20050601	CN 2003-802827		20030127
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JP 2005515889	T	20050602	JP 2003-563741		20030127
				<--	
NZ 534617	A	20050826	NZ 2003-534617		20030127
				<--	
AT 314156	T	20060115	AT 2003-734693		20030127
				<--	
ES 2254942	T3	20060616	ES 2003-734693		20030127

RU 2301117	C2	20070620	RU 2004-126445	<--	200301 27
AU 2003239287	B2	20071129	AU 2003-239287	<--	200301 27
CA 2510359	A1	20040708	CA 2003-2510359	<--	200312 15
WO 2004056496	A2	20040708	WO 2003-EP51008	<--	200312 15
WO 2004056496	A3	20040923		<--	
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003299236	A1	20040714	AU 2003-299236		200312 15
EP 1572379	A2	20050914	EP 2003-799569	<--	200312 15
BR 2003017587	A	20051122	BR 2003-17587	<--	200312 15
CN 1726097	A	20060125	CN 2003-80106495	<--	200312



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JP	2006511344	T	20060406	JP 2005-502570	200312
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EP	1842601	A1	20071010	EP 2007-103712	200312
					15
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	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,				
	IE, IT, LI, LU, MC, NL, PT, RO, SE, SI, SK, TR				
NZ	541150	A	20080328	NZ 2003-541150	200312
					15
				<--	
MX	2004PA07334	A	20041126	MX 2004-PA7334	200407
					29
				<--	
IN	2004CN01889	A	20070921	IN 2004-CN1889	200408
					25
				<--	
US	20050147919	A1	20050707	US 2005-502208	200502
					09
				<--	
MX	2005PA06693	A	20050908	MX 2005-PA6693	200506
					20
				<--	
PRAI	DE 2002-10203245	A	20020129	<--	
	DE 2002-10260332	A	20021220	<--	
	WO 2003-EP780	W	20030127		
	EP 2003-799569	A3	20031215		
	WO 2003-EP51008	W	20031215		
OS	MARPAT 139:165900				
AB	The invention relates to a process and to the corresponding app. for the prodn. of strongly adherent coatings on an inorg. or org. substrate, wherein in a first step: (a) a low-temp. plasma, a corona discharge or a flame is caused to act on the inorg. or org. substrate, in a second step: (b) one or more photoinitiators or mixts. of photoinitiators with monomers, contg. at least one ethylenically unsatd. group, or solns., suspensions or emulsions of the afore-mentioned substances, are applied at normal pressure to the inorg. or org. substrate, in a third step: (c) using suitable methods				

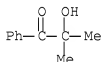
those aforementioned substances are dried and/or irradiated with electromagnetic waves and, optionally, in a fourth step (d) the substrate so pretreated is provided with a coating and the coating is cured or dried. A LDPE substrate was exposed to an Ar/O plasma and contacted with a soln. of H<sub>2</sub>C:CHCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O-p-C<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Me<sub>2</sub>OH, then coated with a compn. contg. Ebecryl 604, SR 344, and Darocur 1173 and exposed to UV to give a coated substrate.

IT 7473-98-5, Darocur 1173 106797-53-9  
110430-09-6

(process for the prodn. of strongly adherent coatings by substrate surface treatment)

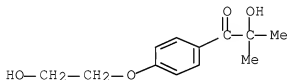
RN 7473-98-5 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl- (CA INDEX NAME)



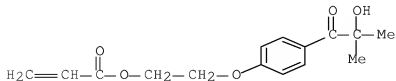
RN 106797-53-9 HCA

CN 1-Propanone, 2-hydroxy-1-[4-(2-hydroxyethoxy)phenyl]-2-methyl- (CA INDEX NAME)



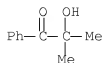
RN 110430-09-6 HCA

CN 2-Propenoic acid, 2-[4-(2-hydroxy-2-methyl-1-oxopropyl)phenoxy]ethyl ester (CA INDEX NAME)



IC ICM B05D003-02  
ICS B05D003-06; B05D003-14  
CC 42-2 (Coatings, Inks, and Related Products)  
IT Polysiloxanes, uses  
(acrylates, Ebecryl 350; process for the prodn. of  
strongly adherent coatings by substrate surface treatment)  
IT Electric corona  
Flame  
Plasma  
(surface treatment by; process for the prodn. of strongly  
adherent coatings by substrate surface treatment)  
IT 947-19-3, Irgacure 184 7473-98-5, Darocur 1173  
106797-53-9 110430-09-6  
(process for the prodn. of strongly adherent coatings by  
substrate surface treatment)  
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L63 ANSWER 6 OF 10 HCA COPYRIGHT 2008 ACS on STN  
AN 139:58377 HCA Full-text  
TI Smart plasma priming - a new surface modification  
technology with superior interface features  
AU Kunz, M.; Bauer, M.  
CS inprotec Inc., Heitersheim, Germany  
SO Interfinish 2000, [Internationale Oberflaechenkongress], 15th,  
Garmisch Partenkirchen, Germany, Sept. 13-15, 2000 (2000),  
673-679 Publisher: Deutsche Gesellschaft fuer Galvano- und  
Oberflaechentechnik eV, Hilden, Germany.  
CODEN: 69DMGQ  
DT Conference; (computer optical disk)  
LA English  
AB Smart plasma priming is a new and versatile technol. to improve the  
adhesion of UV-cured inks, coatings and adhesives, and in some cases  
thin metal films on polymer substrates. Superior adhesion is achieved  
by the formation of covalent bonds between the polymer surface and  
the coating. Formation of the covalent bonds is accomplished by a  
combination of a plasma treatment and subsequent application of  
acrylated photoinitiator. This permanent and homogeneous surface  
modification introduces a latent functionality which can be activated  
by UV light and used for lithog. purposes.  
IT 7473-98-5, Darocur 1173  
(modification of polymer foil surface by smart plasma  
priming using)  
RN 7473-98-5 HCA  
CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl- (CA INDEX NAME)

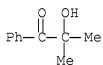


- CC 66-3 (Surface Chemistry and Colloids)  
Section cross-reference(s): 42
- ST smart plasma priming surface modification interface  
covalent bond adhesion
- IT Polysiloxanes, processes  
(acrylates; modification of polymer foil surface by  
smart plasma priming using)
- IT Coating process  
(modification of polymer foil surface by smart plasma  
priming with superior interface features)
- IT Coating process  
(plasma spraying; modification of polymer foil surface  
by smart plasma priming with superior interface  
features)
- IT EPDM rubber  
Fluoropolymers, processes  
Polyamides, processes  
Polyesters, processes  
(polymer foil; modification of polymer foil surface by smart  
plasma priming with superior interface features)
- IT 7473-98-5, Darocur 1173 26570-48-9, Sr344 79586-46-2,  
Ebecryl 604  
(modification of polymer foil surface by smart plasma  
priming using)
- IT 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene  
9003-07-0, Polypropylene  
(polymer foil; modification of polymer foil surface by smart  
plasma priming with superior interface features)
- L63 ANSWER 7 OF 10 HCA COPYRIGHT 2008 ACS on STN
- AN 136:136276 HCA Full-text
- TI Smart plasma Priming - a new surface modification  
technology with superior interface features
- AU Kunz, Martin; Bauer, Michael
- CS Heitersheim, Germany
- SO Galvanotechnik (2001), 92(5), 1350-1354
- CODEN: GVTKAY; ISSN: 0016-4232
- PB Eugen G. Leuze Verlag
- DT Journal

LA English  
 AB Using the new and highly versatile Smart Priming technol., adhesion of UV-cure inks, org. coatings, adhesives and to some extent also thin metal films to plastics, can be improved. The method is based on forming covalent bonds between substrate and coating, using a combination of plasma treatment and introduction of a photosensitive acrylate compd. The uniform and homogeneous surface which results is idea for use with UV light for lithog. purposes.

IT 7473-98-5, Darocur 1173  
 (photoinitiator, coatings contg.; new surface modification technol. with superior interface features in smart plasma priming)

RN 7473-98-5 HCA  
 CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl- (CA INDEX NAME)



CC 42-2 (Coatings, Inks, and Related Products)  
 ST surface modification technol plasma priming coating  
 IT Coating process  
 Plasma  
 Surface treatment  
 (new surface modification technol. with superior interface features in smart plasma priming)

IT Fluoropolymers, properties  
 Polyamides, properties  
 Polyesters, properties  
 (new surface modification technol. with superior interface features in smart plasma priming)

IT Crosslinking catalysts  
 (photochem., Darocur 1173; new surface modification technol. with superior interface features in smart plasma priming)

IT EPDM rubber  
 (polypropylene blends; new surface modification technol. with superior interface features in smart plasma priming)

IT Polymer blends  
 (polypropylene/EPDM; new surface modification technol. with superior interface features in smart plasma priming)

IT 26570-48-9, Sartomer SR 344 79586-46-2, Ebecryl 604  
 (coatings; new surface modification technol. with superior interface features in smart plasma priming)

IT 9003-07-0, Polypropylene  
(neat and EPDM blends; new surface modification technol. with superior interface features in smart plasma priming)

IT 9002-84-0, PTFE 9002-88-4, Polyethylene  
(new surface modification technol. with superior interface features in smart plasma priming)

IT 7473-98-5, Darocur 1173  
(photoinitiator, coatings contg.; new surface modification technol. with superior interface features in smart plasma priming)

IT 7440-37-1, Argon, uses 7782-44-7, Oxygen, uses  
(plasma gas; new surface modification technol. with superior interface features in smart plasma priming)

L63 ANSWER 8 OF 10 HCA COPYRIGHT 2008 ACS on STN  
AN 135:34083 HCA Full-text  
TI Superior adhesion with "smart priming" -new surface modification technology

AU Kunz, Martin; Bauer, Michael  
CS improtec Inc., Heitersheim, Germany  
SO RadTech Report (2000), 14(6), 34-39  
CODEN: RARPEH; ISSN: 1056-0793

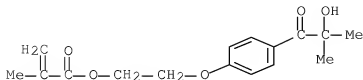
PB RadTech International North America  
DT Journal  
LA English

AB Polymers usually need a pretreatment to adjust their surface properties for subsequent coating, printing or laminating process steps. Traditional surface modifying technologies introduce polar groups to increase the surface energy with most phys. interactions leading to enhanced, but relatively weak and unstable adhesion. A substantially new approach, reported here, turns the interaction between polymer surface and a subsequent coating into a well-defined, chem. directed mechanism. Subsequent to a plasma or corona pretreatment, an acrylated photoinitiator is deposited from the gas phase onto the activated polymer surface, forming a very thin, covalently anchored and crosslinked primer layer. After application of a UV-curable formulation and UV exposure, a covalent bond between the substrate and the coating is formed leading to superior adhesion. Furthermore, selective adhesion is achievable by irradiating the system with scanning laser beams or through masks leading to structured modification of the surface (lithog.).

IT 115055-21-5  
(polymerizable photoinitiator; polymer surface priming by acrylic layer plasma polymn. for superior adhesion to coating materials)

RN 115055-21-5 HCA  
CN 2-Propenoic acid, 2-methyl-, 2-[4-(2-hydroxy-2-methyl-1-

oxopropyl)phenoxy]ethyl ester (CA INDEX NAME)



- CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 42
- ST plasma polymn primer polymer coating
- IT Polysiloxanes, uses  
(acrylates, coating; polymer surface priming by  
acrylic layer plasma polymn. for superior  
adhesion to coating materials)
- IT Polymerization  
(plasma; polymer surface priming by acrylic  
layer plasma polymn. for superior adhesion to coating  
materials)
- IT Adhesion, physical  
Lithography  
(polymer surface priming by acrylic layer  
plasma polymn. for superior adhesion to coating  
materials)
- IT EPDM rubber  
Fluoropolymers, uses  
Polyamides, uses  
Polyesters, uses  
(substrate; polymer surface priming by acrylic layer  
plasma polymn. for superior adhesion to coating  
materials)
- IT 26570-48-9, Sartomer SR 344 79586-46-2, Ebecryl 604  
(coating; polymer surface priming by acrylic layer  
plasma polymn. for superior adhesion to coating  
materials)
- IT 115055-21-5  
(polymerizable photoinitiator; polymer surface priming by  
acrylic layer plasma polymn. for superior  
adhesion to coating materials)
- IT 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene  
9003-07-0, Polypropylene  
(substrate; polymer surface priming by acrylic layer  
plasma polymn. for superior adhesion to coating  
materials)

RE.CNT 7        THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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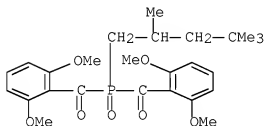
FORMULA (II)

=> D L65 1 BIB ABS HITSTR HITIND

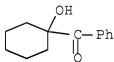
L65 ANSWER 1 OF 1 HCA COPYRIGHT 2008 ACS on STN  
AN 128:198477 HCA Full-text  
TI Integrated optical devices achieved by sol-gel process  
AU Coudray, P.; Etienne, P.; Porque, J.; Moreau, Y.; Najafi, S. I.  
CS Laboratoire d'Analyse d'Interfaces et de Nanophysique, U.  
Montpellier II, Fr.  
SO Proceedings of SPIE-The International Society for Optical  
Engineering (1998), 3278(Integrated Optic Devices II),  
252-258  
CODEN: PSISDG; ISSN: 0277-786X  
PB SPIE-The International Society for Optical Engineering  
DT Journal  
LA English  
AB Recently, the sol-gel process, already used in optical science as  
protective coating and antireflection layer, appears to be a low cost  
alternative to the conventional technologies such as LiNbO3, ion  
exchange in glass or plasma deposition of dielec. on silicon.  
Moreover, this is a low temp. process, which enables the realization  
of hybrid optoelectronic compds. A buffer layer, also made by sol-  
gel process, isolates the guide from the silicon substrate and  
confines the guided modes into the center of the guide. This yields  
very low insertion losses. Moreover, the use of a hybrid organo-  
mineral sol-gel enables to obtain thick layers that reduce the  
coupling losses between guides and single mode optical fibers. At  
last, these devices are encapsulated with an anti-scratch protective  
coating which reduce the risk of damage during handling. It is  
possible now to produce high performance channel waveguides  
(propagation losses less than 0.1 dB/cm) by simple UV-imprinting in a  
photocurable sol-gel layer. The control of the process parameters  
opens the route to the fabrication of a no. of passive optical  
devices, such as 1 + 8 beam splitter with only 7 dB of total losses  
at 1.3  $\mu\text{m}$  wavelength, and directional coupler which are working as  
router and/or splitter. The fabrication and characterization of such  
devices are presented in this paper.



IT 184649-96-5, Irgacure 1800  
 (buffer layer compn.; sol-gel process in fabrication of  
 integrated optical devices)  
 RN 184649-96-5 HCA  
 CN Methanone, (1-hydroxycyclohexyl)phenyl-, mixt. with  
 bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA  
 INDEX NAME)  
 CM 1  
 CRN 145052-34-2  
 CMF C26 H35 O7 P



CM 2  
 CRN 947-19-3  
 CMF C13 H16 O2



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related  
 Properties)  
 IT 184649-96-5, Irgacure 1800  
 (buffer layer compn.; sol-gel process in fabrication of  
 integrated optical devices)  
 RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FORMULA (III)

=> D L74 1-15 BIB ABS HITSTR HITIND

L74 ANSWER 1 OF 15 HCA COPYRIGHT 2008 ACS on STN

AN 140:225897 HCA Full-text

TI Photosensitive electrically insulating resin composition,  
photosensitive electrically insulating film, and photosensitive  
electrically insulating material for plasma display panel

IN Fushida, Hitoshi; Oshio, Kiminori; Obitani, Hiroyuki

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004069755	A	20040304	JP 2002-224870	200208 01

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	JP 3947057	B2	20070718	
PRAI	JP 2002-224870		20020801	<--

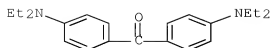
OS MARPAT 140:225897

AB The photosensitive elec. insulating compn. contains (A) org. components contg. p-R2NC6H4-p-C(O)C6H4NR2 (R = Me, Et), a photopolymerizable monomer, a photopolymn. initiator, a water-sol. cellulose deriv., and an OH-contg. acrylic resin and (B) an inorg. powder, preferably powd. glass. The film is made of a support and the photosensitive elec. insulating compn. layer. The compn. is used as barrier ribs, etc., formed by photolithog. in a plasma display panel. The compn. layer shows high photocurability even if the thickness of the layer is high.

IT 90-93-7, 4,4'-Bisdiethylaminobenzophenone  
(polymn. accelerator; in photosensitive elec. insulating compn.  
for photolithog. in manuf. of plasma display panel)

RN 90-93-7 HCA

CN Methanone, bis[4-(diethylamino)phenyl]- (CA INDEX NAME)



- IC ICM G03F007-004  
ICS C08F002-44; C08F291-00; G03F007-032; G03F007-033; H01J011-02
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 57, 76
- ST photosensitive elec insulating resin compn photolithog;  
plasma display panel photosensitive elec insulator
- IT Glass powders  
(in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)
- IT Electric insulators  
Photoimaging materials  
Photolithography  
Plasma display panels  
(photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)
- IT 68406-95-1, H0-MPP  
(H0-MPP; in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)
- IT 24650-42-8, IR 651  
(IR 651, photopolymn. initiator; in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)
- IT 9004-64-2, Hydroxypropyl cellulose 26010-51-5, 2-Hydroxyethyl methacrylate-styrene copolymer  
(in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)
- IT 90-93-7, 4,4'-Bisdiethylaminobenzophenone  
(polymn. accelerator; in photosensitive elec. insulating compn. for photolithog. in manuf. of plasma display panel)
- L74 ANSWER 2 OF 15 HCA COPYRIGHT 2008 ACS on STN
- AN 140:5917 HCA Full-text
- TI Surface-protected transparent plastic moldings with excellent durability
- IN Kita, Toshio; Imanaka, Yoshihiko; Kajiware, Toshinori; Ekinaka, Tatsuya; Suga, Takehiro
- PA Teijin Chemicals Ltd., Japan
- SO Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003342403	A	20031203	JP 2002-152487	200205 27

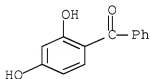
PRAI JP 2002-152487 20020527 <--

AB The moldings, useful for automobile windows and sunroofs, consist of transparent plasma substrates, thermally cured layers with 2-10  $\mu\text{m}$  of compns. contg. acrylic polymers (A) having  $\geq 50$  mol% repeating units  $\text{CH}_2\text{CMe}(\text{COOR}_1)$  ( $\text{R}_1 = \text{C1-4 alkyl}$ ) and  $\text{CH}_2\text{CX}(\text{COOR}_2\text{OH})$  ( $\text{X} = \text{H, Me; R}_2 = \text{C2-5 alkylene}$ ) at the molar ratio of 95:5-64:40, 0.7-5 equiv (per OH groups in A) of polyisocyanates (B) with isocyanate content 5.0-60%, and 10-50 parts (on 100 parts A + B) UV absorbers, and thermally cured layers of organosiloxane compns. contg. colloidal silica and hydrolysis-condensates of trialkoxysilanes  $\text{R}_3\text{Si}(\text{OR}_4)_3$  ( $\text{R}_3 = \text{C1-3 alkyl}$  substituted with C1-4 alkyl, vinyl, methacryloxy, amino, glycidioxy, and/or 3,4-epoxycyclohexyl;  $\text{R}_4 = \text{C1-4 alkyl}$ ). Thus, a polycarbonate sheet coated with a compn. contg. 2-hydroxyethyl methacrylate-Me methacrylate copolymer 8.9, 2-(2-hydroxy-5-t-octylphenyl)benzotriazole 2.5, and hexamethylene diisocyanate 1.1 parts and a compn. contg. 100 parts Snowtex 30 ( $\text{SiO}_2$ ) and 130 parts methyltrimethoxysilane hydrolyzate showed good abrasion, hot water, thermal shock, and weather resistance.

IT 131-56-6, 2,4-Dihydroxybenzophenone  
(UV absorber, primer; surface-protected transparent plastic moldings with good abrasion, hot water, and weather resistance having acrylic and organosiloxane coating layers)

RN 131-56-6 HCA

CN Methanone, (2,4-dihydroxyphenyl)phenyl- (CA INDEX NAME)



IC ICM C08J007-04

ICS B32B027-00; B32B027-18; B32B027-20; B32B027-30; B32B027-36;  
C09D133-10; C09D133-14; C09D175-04; C09D183-02; C09D183-04

CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 42

ST transparency plastic molding coating abrasion resistance;  
 polyisocyanate curing acrylic primer weather  
 resistance; organosiloxane silica topcoat polycarbonate automobile  
 window

IT Coating materials  
 (abrasion- and weather-resistant; surface-protected transparent  
 plastic moldings with good abrasion, hot water, and weather  
 resistance having acrylic and organosiloxane coating  
 layers)

IT Polyurethanes, uses  
 (acrylic, primer; surface-protected transparent plastic  
 moldings with good abrasion, hot water, and weather resistance  
 having acrylic and organosiloxane coating layers)

IT Windows  
 (automotive; surface-protected transparent plastic moldings with  
 good abrasion, hot water, and weather resistance having  
 acrylic and organosiloxane coating layers)

IT UV stabilizers  
 (primer contg.; surface-protected transparent plastic moldings  
 with good abrasion, hot water, and weather resistance having  
 acrylic and organosiloxane coating layers)

IT Polycarbonates, uses  
 (substrate; surface-protected transparent plastic moldings with  
 good abrasion, hot water, and weather resistance having  
 acrylic and organosiloxane coating layers)

IT Primers (paints)  
 Transparent materials  
 (surface-protected transparent plastic moldings with good  
 abrasion, hot water, and weather resistance having  
 acrylic and organosiloxane coating layers)

IT Molded plastics, uses  
 (surface-protected transparent plastic moldings with good  
 abrasion, hot water, and weather resistance having  
 acrylic and organosiloxane coating layers)

IT Silsesquioxanes  
 (topcoat; surface-protected transparent plastic moldings with  
 good abrasion, hot water, and weather resistance having  
 acrylic and organosiloxane coating layers)

IT Coating materials  
 (topcoats; surface-protected transparent plastic moldings with  
 good abrasion, hot water, and weather resistance having  
 acrylic and organosiloxane coating layers)

IT 131-56-6, 2,4-Dihydroxybenzophenone 3147-75-9,  
 2-(2-Hydroxy-5-t-octylphenyl)benzotriazole 147315-50-2,  
 2-(4,6-Diphenyl-1,3,5-triazin-2-yl)-5-[(hexyl)oxy]phenol

(UV absorber, primer; surface-protected transparent plastic moldings with good abrasion, hot water, and weather resistance having acrylic and organosiloxane coating layers)

IT 7631-86-9, Silica, uses  
(colloidal, Snowtex 30, Cataloid SN 30, topcoat; surface-protected transparent plastic moldings with good abrasion, hot water, and weather resistance having acrylic and organosiloxane coating layers)

IT 26335-61-5P, Ethyl methacrylate-2-hydroxyethyl methacrylate copolymer 26355-01-1P, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer  
(primer; surface-protected transparent plastic moldings with good abrasion, hot water, and weather resistance having acrylic and organosiloxane coating layers)

IT 81546-20-5P 120901-57-7P 476274-09-6P, 2-Hydroxyethyl methacrylate-methyl methacrylate-Vestanat B 1358/100 copolymer 627529-56-0P 627529-57-1P 627535-15-3P 627535-16-4P 627535-17-5P  
(primer; surface-protected transparent plastic moldings with good abrasion, hot water, and weather resistance having acrylic and organosiloxane coating layers)

IT 25498-03-7P, Methyltrimethoxysilane homopolymer 141087-43-6P, Methyltrimethoxysilane-tetraethoxysilane copolymer  
(topcoat; surface-protected transparent plastic moldings with good abrasion, hot water, and weather resistance having acrylic and organosiloxane coating layers)

L74 ANSWER 3 OF 15 HCA COPYRIGHT 2008 ACS on STN  
AN 139:324852 HCA Full-text  
TI Composition of silicon-containing copolymer with good material properties, solvent-soluble crosslinked silicon-containing copolymer, and cured articles obtained therefrom  
IN Tashiro, Yuji  
PA Clariant International Ltd., Switz.; Clariant (Japan) K.K.  
SO PCT Int. Appl., 50 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2003087228	A1	20031023	WO 2003-JP4336	20030404

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR  
EP 1500685 A1 20050126 EP 2003-715766

200304  
04

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK  
CN 1643066 A 20050720 CN 2003-806271

200304  
04

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US 20050123774 A1 20050609 US 2004-506855

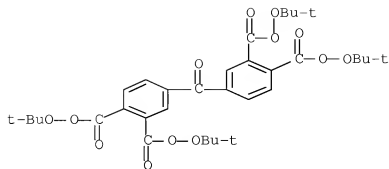
200409  
02

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PRAI JP 2002-111128 A 20020412 <--  
WO 2003-JP4336 W 20030404

AB The present invention relates to a compn. comprising a crosslinking agent and a silicon-contg. copolymer with no.av. mol. wt. 500-1,000,000 comprising (R1R2SiA)p, (R3R4SiR7SiR5R6)q, and optionally (R8SiHA)r, (R9SiA)s, (R1R2SiNHR10NH)t, (R8SiNHR10NH)u, and (R9SiNHR10NH)w, wherein A = NH or O; R1, R2, R3, R4, R5, R6, R8, R9 = independently alkyl, alkenyl, cycloalkyl, aryl, aralkyl, alkylamino, alkylsilyl, or alkoxy; R7 = divalent group; R10 = divalent arom. group; p, q, r, s, t, u, w = arbitrary no. excluding 0; and SiO/(SiN + SiO) = 0.01-0.99. The resultant compn. is applied to a substrate and thermally cured at  $\geq 150^\circ$ . Thus, phenyltrichlorosilane 47, diphenyldichlorosilane 56, methyldichlorosilane 3.8, and 1,4-bis(dimethylchlorosilyl)benzene 50 g were reacted to give a copolymer with no. av. mol. wt. 2200, light transmittance 98%, and dielec. const. 2.8, 10 g of which was reacted with 0.5 g tetraisocyanatosilane to give a crosslinked copolymer with no. av. mol. wt. 2300 d. 1.30 g/cm<sup>3</sup>, dielec. const. 2.73, and good solvent resistance.

IT 77473-08-6, 3,3',4,4'-Tetra(tert-butylperoxycarbonyl)benzophenone  
(crosslinker; prepn. of silicon-contg. copolymer compns. with good material properties for solvent-sol. crosslinked silicon-contg. copolymers)

RN 77473-08-6 HCA  
CN 1,2-Benzenedicarboperoxoic acid, 4,4'-carbonylbis-,  
1,1',2,2'-tetrakis(1,1-dimethylethyl) ester (CA INDEX NAME)



IC ICM C08L083-14  
 ICS C08G077-54; G02F001-1333; C08J005-18; H01J011-02; G02F001-1337  
 CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 38, 73, 74  
 IT Crosslinking agents  
 Liquid crystal displays  
 Optical materials  
 Plasma display panels  
 Plastic films  
 (prepn. of silicon-contg. copolymer compns. with good material  
 properties for solvent-sol. crosslinked silicon-contg.  
 copolymers)  
 IT 77473-08-6, 3,3',4,4'-Tetra(tert-  
 butylperoxycarbonyl)benzophenone  
 (crosslinker; prepn. of silicon-contg. copolymer compns. with  
 good material properties for solvent-sol. crosslinked  
 silicon-contg. copolymers)  
 RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L74 ANSWER 4 OF 15 HCA COPYRIGHT 2008 ACS on STN  
 AN 135:168055 HCA Full-text  
 TI Production of surface coating on inorg. or org. substrate by  
 plasma-activation  
 IN Kunz, Martin; Bauer, Michael  
 PA Ciba Specialty Chemicals Holding Inc., Switz.  
 SO PCT Int. Appl., 42 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	----- WO 2001058971	A2	20010816	WO 2001-EP1113	200102 02
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	WO 2001058971	A3	20020207		
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2396806	A1	20010816	CA 2001-2396806	200102 02
				<--	
	AU 2001042365	A	20010820	AU 2001-42365	200102 02
				<--	
	EP 1255616	A2	20021113	EP 2001-915186	200102 02
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	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003522021	T	20030722	JP 2001-558116	200102 02
				<--	
	US 20030129322	A1	20030710	US 2002-181008	200207 11
				<--	
	US 6733847	B2	20040511		
	MX 2002PA07598	A	20021213	MX 2002-PA7598	200208 07
				<--	
PRAI	CH 2000-254	A	20000208	<--	
	WO 2001-EP1113	W	20010202	<--	
OS	MARPAT 135:168055				

AB The coatings on an inorg. or org. substrate is produced by (a) irradiation on the substrate with a low-temp. plasma discharge, a corona discharge, high-energy UV radiation or electron radiation, (b) application of electron- or H-donor contg. ethylenically unsatd. group to the substrate to react with the formed radicals, (c) coating a compn. comprising  $\geq 1$  ethylenically unsatd. monomer or oligomer with either a photoinitiator, followed by curing by electromagnetic and/or ionizing radiation, or a thermally activation initiator, followed by thermal curing. Thus, polyethylene film was irradiated with argon/O<sub>2</sub> plasma, then 2-N-morpholinoethyl acrylate was introduced and a coating of 30 nm thickness was obtained, which was coated with an epoxy resin (Ebecryl 604 89%, SR 344 10% and Ebecryl 350 1%) and an photoinitiator 2% Darocur to give a coating with good adhesion.

IT 119-61-9, Benzophenone, uses  
(catalyst; prodn. of surface coating on inorg. or org. substrate by plasma-activation)

RN 119-61-9 HCA

CN Methanone, diphenyl- (CA INDEX NAME)



IC ICM C08G

CC 42-10 (Coatings, Inks, and Related Products)

ST plasma activation surface coating; morpholinoethyl acrylate precoat epoxy acrylate coating

IT Polysiloxanes, uses  
(acrylic, polymers with epoxy acrylates and acrylates; prodn. of surface coating on inorg. or org. substrate by plasma-activation)

IT Polysiloxanes, uses  
(epoxy-polyoxyalkylene-; prodn. of surface coating on inorg. or org. substrate by plasma-activation)

IT Polyoxyalkylenes, uses  
(epoxy-siloxane-; prodn. of surface coating on inorg. or org. substrate by plasma-activation)

IT Crosslinking catalysts  
(photochem.; prodn. of surface coating on inorg. or org. substrate by plasma-activation)

IT Coating materials  
(photocurable; prodn. of surface coating on inorg. or org. substrate by plasma-activation)

IT Polymerization  
(plasma; prodn. of surface coating on inorg. or org.

substrate by plasma-activation)

IT Epoxy resins, uses  
(polyoxyalkylene-siloxane-; prodn. of surface coating on inorg.  
or org. substrate by plasma-activation)

IT Acrylic polymers, preparation  
(polysiloxane-, polymers with epoxy acrylates and  
acrylates; prodn. of surface coating on inorg. or org.  
substrate by plasma-activation)

IT 119-61-9, Benzophenone, uses 7473-98-5, Darocur 1173  
22031-26-1 75081-21-9, Isopropylthioxanthone  
(catalyst; prodn. of surface coating on inorg. or org. substrate  
by plasma-activation)

IT 148779-78-6P 354123-95-8P 354123-96-9P  
(precoat; prodn. of surface coating on inorg. or org. substrate  
by plasma-activation)

IT 55972-47-9P 352711-58-1P 352711-59-2P  
(precoating; prodn. of surface coating on inorg. or org.  
substrate by plasma-activation)

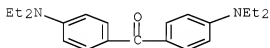
IT 28902-82-1, Acryloylmorpholine polymer  
(prodn. of surface coating on inorg. or org. substrate by  
plasma-activation)

IT 26570-48-9DP, polymers with epoxy acrylates and  
acrylate-siloxanes 79586-46-2DP, Ebecryl 604, polymers  
with acrylates and acrylate-siloxanes  
354123-94-7P 354123-97-0P  
(prodn. of surface coating on inorg. or org. substrate by  
plasma-activation)

L74 ANSWER 5 OF 15 HCA COPYRIGHT 2008 ACS on STN  
AN 134:179620 HCA Full-text  
TI Ceramic pattern forming compositions and ceramic pattern  
formation  
IN Nakajima, Hiroyuki  
PA Nippon Synthetic Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 2001048656	A	20010220	JP 1999-228082	199908 12
				<--	
PRAI	JP 1999-228082		19990812	<--	

- AB The title compns. comprise (a) ceramic materials (e.g., Pb borosilicate, alumina, and TiO<sub>2</sub>), (b) unsatd. double bond-contg. curable resins (e.g., diallyl phthalate, cresol novolak epoxy acrylates), (c) thermopolymn. initiators (e.g., Irgacure 651, tert-butylperoxy benzoate), and optionally (d) silanes (e.g., KBM 403, A-174). The ceramic patterns, useful for liq. crystal display device, fluorescent display device, plasma display panel, etc., are prep'd. by forming a photo-sensitive resin layer [e.g., Bu methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-Me methacrylate copolymer, tetraethylene glycol dimethacrylate, p,p'-bis(diethylamino)benzophenone, hexaallyl diimidazole, Leuco Crystal Violet, and Malachite Green in solvents] on a substrate (e.g., glass plate), forming a pattern by using a pattern mask, exposing to light, and developing, filling the intaglio with the ceramic materials, and sintering to form a ceramic pattern.
- IT 90-93-7, p,p'-Bis(diethylamino)benzophenone  
(photopolymn. initiators; ceramic pattern forming compns. and ceramic pattern formation)
- RN 90-93-7 HCA
- CN Methanone, bis[4-(diethylamino)phenyl]- (CA INDEX NAME)



- IC ICM C04B035-63  
ICS H01J009-02; H01J011-02
- CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 57, 74
- ST ceramic pattern formation plasma display panel; lead borosilicate alumina titania ceramic pattern compn; diallyl phthalate ceramic pattern compn; novolak epoxy acrylate ceramic pattern compn; thermopolymn initiator ceramic pattern compn
- IT Coupling agents  
Plasma display panels  
Sintering  
(ceramic pattern forming compns. and ceramic pattern formation)
- IT Phenolic resins, uses  
(epoxy, novolak, acrylates, cresol-based; ceramic pattern forming compns. and ceramic pattern formation)
- IT Epoxy resins, uses  
(phenolic, novolak, acrylates, cresol-based; ceramic pattern forming compns. and ceramic pattern formation)
- IT 90-93-7, p,p'-Bis(diethylamino)benzophenone 86590-75-2

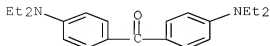
(photopolymn. initiators; ceramic pattern forming compns. and ceramic pattern formation)

L74 ANSWER 6 OF 15 HCA COPYRIGHT 2008 ACS on STN  
AN 132:28739 HCA Full-text  
TI Formation of ITO films by lift-off method  
IN Nakajima, Hiroyuki; Kisoda, Kinya  
PA Nippon Synthetic Chemical Industry Co., Ltd., Japan; Chugai Ro Co., Ltd.  
SO Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	
PI	JP 11339574	A	19991210	JP 1998-166037	19980528

PRAI JP 1998-166037 19980528 <-->  
AB The process involves (i) forming photosensitive resin compn. layers on substrates, (ii) exposing the layers via patterned masks, (iii) developing, (iv) forming ITO films, (v) peeling cured layers off from the substrates, wherein the compns. contain copolymers contg. (meth)acrylic acid esters, (meth) acrylic acids, and (OH)-contg. (meth)acrylic acid esters as base polymers, ethylenically unsatd. compds., and photopolymn. initiators, and in (iv), formation of ITO films are done by activated reactive deposition using pressure-gradient plasma guns. The ITO films have good transparency, pattern formability, and low resistivity and are esp. suitable for plasma display panels.  
IT 90-93-7, 4,4'-Diethylaminobenzophenone 119-61-9, Benzophenone, uses (initiator; formation of ITO films by lift-off method for plasma display panels)  
RN 90-93-7 HCA  
CN Methanone, bis[4-(diethylamino)phenyl]- (CA INDEX NAME)



RN 119-61-9 HCA  
CN Methanone, diphenyl- (CA INDEX NAME)



IC ICM H01B013-00  
ICS G03F007-027; G03F007-033; G03F007-075; H01B001-08; H01J009-02  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
ST ITO film formation lift off method; plasma display panel  
ITO lift off; acrylic resin photoresist ITO film formation  
IT Photoresists  
Plasma display panels  
(formation of ITO films by lift-off method for plasma  
display panels)  
IT 2530-83-8,  $\gamma$ -Glycidoxypropyltrimethoxysilane  
(dope; formation of ITO films by lift-off method for  
plasma display panels)  
IT 50926-11-9, ITO  
(formation of ITO films by lift-off method for plasma  
display panels)  
IT 90-93-7, 4,4'-Diethylaminobenzophenone 119-61-9,  
Benzophenone, uses 7189-82-4  
(initiator; formation of ITO films by lift-off method for  
plasma display panels)  
IT 79-41-4D, Methacrylic acid, polymers 80-62-6D, Methyl  
methacrylate, polymers 96-33-3D, Methyl acrylate  
, polymers 103-11-7D, 2-Ethylhexyl acrylate, polymers  
109-17-1, Tetraethylene glycol dimethacrylate 141-32-2D,  
Butyl acrylate, polymers 818-61-1D, polymers  
868-77-9D, polymers 17831-71-9, Tetraethylene glycol  
diacrylate  
(photoresists; formation of ITO films by lift-off method for  
plasma display panels)

L74 ANSWER 7 OF 15 HCA COPYRIGHT 2008 ACS on STN  
AN 131:29590 HCA Full-text  
TI Methods of measuring analytes with barrier webs  
IN Caldwell, J. Michael  
PA Nextec Applications, Inc., USA  
SO U.S., 55 pp., Cont.-in-part of U.S. Ser. No. 472,568.  
CODEN: USXXAM  
DT Patent

LA English  
FAN.CNT 11

	PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
PI	US 5912116	A	19990615	US 1995-486651	199506 07
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	US 5004643	A	19910402	US 1989-319778	198903 10
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	CA 1338232	C	19960409	CA 1989-593680	198903 14
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	CA 1339587	C	19971216	CA 1989-593681	198903 14
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	CA 1340808	C	19991102	CA 1989-593682	198903 14
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	US 5209965	A	19930511	US 1991-680645	199104 02
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	US 5418051	A	19950523	US 1993-17855	199302 16
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	US 6312523	B1	20011106	US 1999-406080	199909 27
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	US 20020088396	A1	20020711	US 2001-982250	200110 16
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PRAI	US 1988-167630	B2	19880314	<--	
	US 1988-167643	B2	19880314	<--	
	US 1988-167797	B2	19880314	<--	
	US 1988-167869	B2	19880314	<--	
	US 1989-319778	A1	19890310	<--	
	US 1991-680645	A1	19910402	<--	

US 1993-17855	A2	19930216	<--
US 1995-407191	A2	19950317	<--
US 1995-442983	A2	19950517	<--
US 1995-472568	A2	19950607	<--
US 1997-962698	A3	19971103	<--
US 1999-406080	A1	19990927	<--

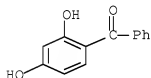
AB The present invention includes novel barrier webs that have certain desirable phys. qualities such as water resistance, increased durability, improved barrier qualities and the like. The present invention further comprises a barrier web comprising a web that has been treated with a curable shear thinned thixotropic polymer compn., the fabric being adapted to be substantially impermeable to liqs., permeable to gases and impermeable to microorganisms. The barrier webs of the present invention are either impermeable to all microorganisms or are impermeable to microorganisms of certain sizes. The present invention also includes fabrics that are capable of either selective binding certain microorganisms, particles or mols. depending upon what binding partners are incorporated into the polymer before application to the fabric.

IT 131-56-6, Uvinul 400

(methods of measuring analytes with barrier webs)

RN 131-56-6 HCA

CN Methanone, (2,4-dihydroxyphenyl)phenyl- (CA INDEX NAME)



IC ICM C12Q001-70

ICS G01N033-543

INCL 435005000; X43-5 .792; X43-651.8; X43-653.5

CC 9-16 (Biochemical Methods)

Section cross-reference(s): 38

IT Silicone rubber, uses

(di-Me, vinyl group-terminated; methods of measuring analytes with barrier webs)

IT Antimicrobial agents

Ascites

Bacteria (Eubacteria)

Blood analysis

Blood plasma

Blood serum



Cell  
 Cerebrospinal fluid  
 Cotton fibers  
 Dyes  
 Ebola virus  
 Films  
 Foams  
 Hepatitis B virus  
 Hepatitis C virus  
 Human immunodeficiency virus  
 Jute  
 Latex  
 Leather  
 Leather substitutes  
 Lymph  
 Membrane filters  
 Microorganism  
 Mucus  
 Pigments, nonbiological  
 Saliva  
 Semen  
 Silk  
 Streptococcus group A  
 Synovial fluid  
 Urine  
 Virus  
 Wool

(methods of measuring analytes with barrier webs)

IT 51-79-6, Urethane 64-19-7, Acetic acid, uses 2669-89-8,  
 Vinyl 9002-84-0 9004-34-6, Cellulose, uses 9004-35-7,  
 Cellulose acetate 9004-70-0, Nitrocellulose 25038-59-9, uses

(methods of measuring analytes with barrier webs)

IT 131-56-6, Uvinul 400

(methods of measuring analytes with barrier webs)

RE.CNT 89 THERE ARE 89 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L74 ANSWER 8 OF 15 HCA COPYRIGHT 2008 ACS on STN

AN 128:250752 HCA Full-text

TI Manufacture of shielding wall of plasma display panel by  
 sandblasting

IN Tsuchiya, Katsunori; Tanno, Kiyoyoshi; Otomo, Satsohi

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 10069851	A	19980310	JP 1996-226577	19960828

&lt;--

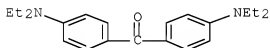
PRAI JP 1996-226577 19960828 &lt;--

AB The shielding wall is manufd. by (1) successively forming a shielding material layer and a photosensitive resin layer on a substrate, (2) exposing and developing the photosensitive layer to form a cured film pattern, (3) sandblasting the shielding material using the cured pattern as a mask, and (4) removing the cured pattern. The method gives shielding walls with high dimensional stability.

IT 90-93-7 119-61-9, Benzophenone, uses  
(photopolymer. initiator; manuf. of shielding wall of plasma display panel by sand blasting)

RN 90-93-7 HCA

CN Methanone, bis[4-(diethylamino)phenyl]- (CA INDEX NAME)



RN 119-61-9 HCA

CN Methanone, diphenyl- (CA INDEX NAME)



IC ICM H01J009-02

ICS G03F007-027; G03F007-028; G03F007-033; G03F007-30; G03F007-40  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST plasma display panel shielding wall; photosensitive resin pattern mask sandblasting glass

IT Plasma display panels

Sandblasting

(manuf. of shielding wall of plasma display panel by sand blasting)

IT Glass, processes  
(manuf. of shielding wall of plasma display panel by sand blasting)

IT Photoresists  
(mask for sand blasting; manuf. of shielding wall of plasma display panel by sand blasting)

IT 25133-97-5, Ethyl acrylate-methacrylic acid-methyl methacrylate copolymer 41637-38-1, FA 321M 153192-14-4, UF 8003  
(mask component; manuf. of shielding wall of plasma display panel by sand blasting)

IT 90-93-7 119-61-9, Benzophenone, uses  
(photopolymn. initiator; manuf. of shielding wall of plasma display panel by sand blasting)

L74 ANSWER 9 OF 15 HCA COPYRIGHT 2008 ACS on STN

AN 110:24833 HCA Full-text

OREF 110:4201a,4204a

TI Photostructurable polyimide compositions

IN Rohde, Ottmar; Perret, Andre Etienne; Pfeifer, Josef

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 15 pp.

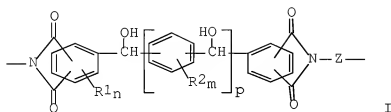
CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 274354	A2	19880713	EP 1987-810771	198712 21
				<--	
	EP 274354	A3	19880803		
	EP 274354	B1	19920108		
	R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
	US 4851506	A	19890725	US 1987-135813	198712 21
				<--	
	CA 1281146	C	19910305	CA 1987-555209	198712 23
				<--	
	JP 63172767	A	19880716	JP 1987-336715	198712 29



AB The title compns., with good adhesion and photosensitivity and useful in the prepn. of etching masks, contain polyimides contg.  $\geq 50$  mol% I (R1, R2 = alkyl, alkoxy; Z = arylene bearing  $\leq 1$  alkyl, alkoxy, alkoxyalkyl, cycloalkyl, or aralkyl group ortho to NH2; m, p = 0-4, n = 0-3) and photocurable arom. polyimides (sol. in org. solvents) contg. Z(NH2) and benzophenone deriv. tetracarboxylic acids. A Si wafer bearing a 1275-Å SiO2 layer was coated with an aminosilane coupler, spin-coated (4250 rpm) with a soln. of di-Me 3,3',4,4'-benzhydroltetracarboxylate-4,4'-methylenebis(2,6-dimethylaniline) copolymer 0.376, 100:55:45 benzophenonetetracarboxylic dianhydride-2,3,5,6-tetramethyl-p-phenylenediamine-4,4'-methylenebis(2-ethyl-6-methylaniline) copolymer 1.504, and butyrolacetone 18.12 g, dried at 90°, exposed to light (1025 mJ/cm2) through a high-resoln. photomask, developed in cyclopentanone, heated at 280°, cleaned in an O plasma, etched and stripped in aq. HF-NH4F, and dipped in ethanolamine at 100°.

IT 118141-33-6

(photostructurable polyimide blends, for etching masks)

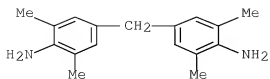
RN 118141-33-6 HCA

CN 1,2-Benzenedicarboxylic acid, 4,4'-carbonylbis-, ar,ar'-dimethyl ester, polymer with 4,4'-methylenebis[2,6-dimethylbenzenamine] (9CI)  
(CA INDEX NAME)

CM 1

CRN 4073-98-7

CMF C17 H22 N2



CM 2

CRN 36928-64-0

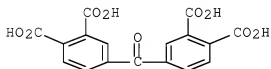
CMF C19 H14 O9

CCI IDS

CM 3

CRN 2479-49-4

CMF C17 H10 O9



CM 4

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C—OH

IC ICM C08L079-08

ICS G03F007-10; C08G073-10

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 74

IT 96126-41-9 96126-65-7 96126-67-9 96211-29-9 101949-11-5

101969-39-5 118141-33-6

(photostructurable polyimide blends, for etching masks)

L74 ANSWER 10 OF 15 HCA COPYRIGHT 2008 ACS on STN

AN 106:41629 HCA Full-text

OREF 106:6805a,6808a

TI Process for the formation of negative patterns in a photoresist layer

IN Roland, Bruno; Vrancken, August

PA UCB S. A., Belg.

SO Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DT Patent

LA French

FAN.CNT 1

	PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
PI	EP 184567	A1	19860611	EP 1985-870142	198510 24
				<--	
	EP 184567	B1	19891213		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
IL	76702	A	19890731	IL 1985-76702	198510 14
				<--	
	CA 1275846	C	19901106	CA 1985-493257	198510 18
				<--	
	JP 61107346	A	19860526	JP 1985-238553	198510 24
				<--	
	JP 04056979	B	19920910		
AT	48708	T	19891215	AT 1985-870142	198510 24
				<--	
	SU 1498400	A3	19890730	SU 1985-3974782	198510 25
				<--	
	JP 06005385	B	19940119	JP 1988-255722	198810 11
				<--	
PRAI	GB 1984-27149	A	19841026	<--	

EP 1985-870142                      A                      19851024    <--

AB    A method for formation of neg. patterns in a photoresist for integrated circuits comprises: (1) covering a substrate by a photosensitive resin layer, comprising a polymer (preferably a phenolic resin) and a photosensitive compd., such as a diazoquinone; (2) exposing the photoresist to visible or UV light through a mask; (3) treating the photoresist layer with a Si compd.; and (4) developing the photoresist by plasma etching to remove the nonirradiated parts of the resin. The Si compd. can be selectively diffused into the irradiated resin regions for fixing. Thus, Si wafers covered with a thermally formed oxide layer 120-nm thick were treated with hexamethyldisilazane to promote adhesion. A photosensitive resin was made from the product from the partial esterification of 6-diazo-5,6-dihydro-5-oxo-1-naphthalenesulfonyl chloride with the condensation product of p-tert-butylphenol and HCHO. The resin was dissolved in a solvent mixt. contg. 2-ethoxyethanol 80, xylene 10 and Bu acetate 10 wt.% to obtain a 25 wt.% soln. The soln. was coated on the Si wafers by centrifugation at 3000 rpm. A resin coating 1.7- $\mu$ m thick was obtained. The coated wafers were cured in a convection oven for 30 min at 90°. The wafers were exposed to UV light through a mask in a com. app. operating at 350-440 nm, at an energy of 60 mJ/cm<sup>2</sup>. The UV-irradiated wafers were exposed to hexamethyldisilazane vapors for 4 min at 91°. After plasma etching with O ions, neg. patterns were obtained, which were practically identical in thickness with the initial deposited resin layer.

IT    68510-93-0  
      (photoresist contg., in neg. pattern formation for integrated circuits)

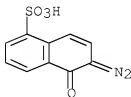
RN    68510-93-0    HCA

CN    1-Naphthalenesulfonic acid, 6-diazo-5,6-dihydro-5-oxo-, ester with phenyl(2,3,4-trihydroxyphenyl)methanone (CA INDEX NAME)

CM    1

CRN   20546-03-6

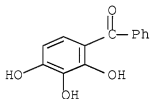
CMF   C10 H6 N2 O4 S



CM 2

CRN 1143-72-2

CMF C13 H10 O4



- IC ICM G03F007-26  
ICS G03F007-08
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 76
- IT 4857-47-0 4857-47-0D, derivs. 4857-48-1 4857-48-1D, derivs.  
9003-53-6, Polystyrene 20546-03-6 20546-03-6D, derivs.  
20680-48-2 20680-48-2D, derivs. 25067-59-8, Poly(N-vinylcarbazole) 27441-51-6 27441-51-6D, derivs. 51257-93-3D, partially esterified 51258-06-1D, partially esterified 68510-93-0 76169-06-7D, partially esterified 82030-45-3D, partially esterified 84135-66-0D, partially esterified 97606-11-6 97606-12-7 103856-47-9 106055-80-5D, partially esterified 106055-82-7D, partially esterified 106055-83-8D, partially esterified 106060-98-4 106060-99-5 106100-59-8D, partially esterified  
(photoresist contg., in neg. pattern formation for integrated circuits)
- IT 7782-44-7, uses and miscellaneous  
(plasma etching by, in neg. pattern formation in photoresists for integrated circuits)
- L74 ANSWER 11 OF 15 HCA COPYRIGHT 2008 ACS on STN
- AN 95:133687 HCA [Full-text](#)
- OREF 95:22399a,22402a
- TI ESCA studies of polyimide and modified polyimide surfaces
- AU Leary, H. J., Jr.; Campbell, D. S.
- CS Gen. Technol. Div., IBM Corp., Essex Junction, VT, 05452, USA
- SO ACS Symposium Series (1981), 162(Photon, Electron, Ion Probes Polym. Struct. Prop.), 419-33



CODEN: ACSMC8; ISSN: 0097-6156

DT Journal

LA English

AB XPS of polyimide surfaces after exposure to heat, humidity, boiling water, O, and O-CF<sub>4</sub> plasma showed imide bond formation. K on the surface of the polyamic acid alters the normal imidization process, and cured polyimide surfaces are not invariant after heat and humidity exposures. Extensive modification of cured polyimide surfaces occurs in exposure to plasmas.

IT 79121-87-2

(surface weathering of, ESCA detn. of)

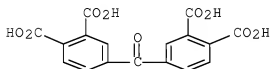
RN 79121-87-2 HCA

CN 1,2-Benzenedicarboxylic acid, 4,4'-carbonylbis-, polymer with 1,3-benzenediamine and 4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2479-49-4

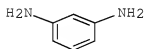
CMF C17 H10 O9



CM 2

CRN 108-45-2

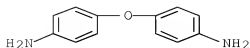
CMF C6 H8 N2



CM 3

CRN 101-80-4

CMF C12 H12 N2 O



CC 36-4 (Plastics Manufacture and Processing)  
 ST ESCA polyimide polyamic acid; polyimide surface ESCA; polyamic acid surface ESCA; heat polyimide surface structure; plasma polyimide surface structure  
 IT 24991-11-5 25036-53-7 25038-81-7 25038-81-7 79121-85-0  
 79121-87-2  
 (surface weathering of, ESCA detn. of)

L74 ANSWER 12 OF 15 HCA COPYRIGHT 2008 ACS on STN

AN 86:141798 HCA [Full-text](#)

OREF 86:22275a,22278a

TI Photopolymerizable pigmented adhesive

IN McGinniss, Vincent D.

PA SCM Corp., USA

SO Braz. Pedido PI, 45 pp.

CODEN: BPXXDX

DT Patent

LA Portuguese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	
PI	BR 7408194	A	19760706	BR 1974-8194	197410 03

<--

PRAI BR 1974-8194

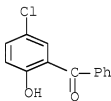
19741003 <--

AB Solvent-free photosensitive coating vehicles which cured rapidly on exposure to UV light or laser radiation, without evolution of volatiles and without degrdn. of the vehicle or substract, were prepd. from ethylenically unsatd. polymers contg. opaque pigments and 0.5-3% halogenated naphthalene derivs. and 0.1-2% arom. aminocarbonyl or 0.5-2% arom. aldehyde or ketone photosensitizers. Thus, 1.5% Michlers' Ketone [90-94-8] and 1.5%  $\alpha$ -(chloromethyl)naphthalene [86-52-2] were mixed with a coating vehicle contg. a Bisphenol A diglycidyl ether diacrylate-2-ethylhexyl acrylate-pentaerythritol triacrylate copolymer [62118-15-4] and TiO<sub>2</sub>. This coating material was spread into a 0.00125 cm thick film and hardened in 0.1 s on exposure to a plasma arc and 10 s on exposure to UV light.

IT 85-19-8D, reaction products with bisphenol A diglycidyl ether diacrylate 85-52-9D, reaction products with propylene oxide 131-56-6D, reaction products with ethylenimine 2985-80-0D, reaction products with ethylenimine 62124-95-2D, reaction products with bisphenol A diglycidyl ether diacrylate 63306-09-2D, reaction products with benzophenone derivs. (coatings contg., photosensitive)

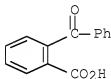
RN 85-19-8 HCA

CN Methanone, (5-chloro-2-hydroxyphenyl)phenyl- (CA INDEX NAME)



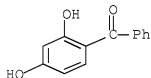
RN 85-52-9 HCA

CN Benzoic acid, 2-benzoyl- (CA INDEX NAME)



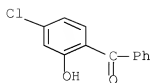
RN 131-56-6 HCA

CN Methanone, (2,4-dihydroxyphenyl)phenyl- (CA INDEX NAME)

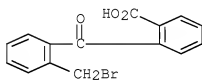


RN 2985-80-0 HCA

CN Methanone, (4-chloro-2-hydroxyphenyl)phenyl- (CA INDEX NAME)



RN 62124-95-2 HCA  
 CN Benzoic acid, 2-[2-(bromomethyl)chlorobenzoyl]- (9CI) (CA INDEX NAME)

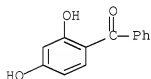


D1- C1

RN 63306-09-2 HCA  
 CN Methanone, (2,4-dihydroxyphenyl)phenyl-, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

CRN 131-56-6  
 CMF C13 H10 O3

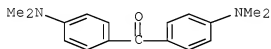


CM 2

CRN 75-56-9  
 CMF C3 H6 O



IT 90-94-8  
 (photosensitizer, for acrylate coatings)  
 RN 90-94-8 HCA  
 CN Methanone, bis[4-(dimethylamino)phenyl]- (CA INDEX NAME)



IT 119-61-9, uses and miscellaneous  
 (photosensitizers, for acrylate coatings)  
 RN 119-61-9 HCA  
 CN Methanone, diphenyl- (CA INDEX NAME)



IC C09D017-00  
 CC 42-10 (Coatings, Inks, and Related Products)  
 IT Siloxanes and Silicones, compounds  
 (polymers with acrylates, coatings contg.  
 photosensitive)  
 IT Soybean oil  
 (polymers with acrylates, coatings contg.,  
 photosensitive)  
 IT 79-10-7D, reaction products with benzoylbenzoic acid and bisphenol A  
 diglycidyl ether diacrylate 85-19-8D, reaction  
 products with bisphenol A diglycidyl ether diacrylate  
 85-52-9D, reaction products with propylene oxide 98-88-4D,  
 reaction products with phenolic resins 106-90-1D, reaction  
 products with benzoylbenzoic acid 131-56-6D, reaction  
 products with ethylenimine 151-56-4D, reaction products with  
 benzophenones and bisphenol diglycidyl ether diacrylates  
 818-61-1D, reaction products with benzophenone derivs. 2421-28-5D,

reaction products with hydroxyethyl acrylate and propylene oxide 2425-79-8D, reaction products with acrylic acid and dihydroxybenzophenone 2495-35-4 2985-80-0D, reaction products with ethylenimine 3066-71-5D, polymers with acrylates and soybean oil 13048-33-4D, polymers with acrylates and soybean oil 25085-99-8D, reaction products with benzoylbenzoic acid 26471-62-5D, reaction products with benzoylbenzoic acid, hydroxyethyl acrylate, and propylene oxide 62124-95-2D, reaction products with bisphenol A diglycidyl ether diacrylate 62124-96-3D, reaction products with propylene oxide 62124-97-4D, reaction products with bisphenol A diglycidyl ether diacrylate 62181-56-0 63306-09-2D, reaction products with benzophenone derivs.

(coatings contg., photosensitive)

- IT 3524-68-3D, polymers with acrylates and siloxanes  
48145-04-6D, polymers with acrylates and siloxanes  
54779-14-5 60653-46-5  
(coatings, photosensitive)
- IT 82-86-0 91-56-5 93-55-0 100-52-7, uses and miscellaneous  
120-78-5 431-03-8 486-25-9 492-22-8 644-13-3 1733-76-2  
1928-01-4 3163-27-7 17078-27-2  
(photosensitizer, for acrylate coating materials)
- IT 84-11-7 86-52-2 90-94-8 98-86-2, uses and  
miscellaneous 134-81-6 28602-27-9  
(photosensitizer, for acrylate coatings)
- IT 90-47-1 119-61-9, uses and miscellaneous 26588-36-3  
(photosensitizers, for acrylate coatings)

L74 ANSWER 13 OF 15 HCA COPYRIGHT 2008 ACS on STN

AN 85:162043 HCA Full-text

OREF 85:25926h,25927a

TI Hardening polymerizable binders using uv rays or laser beam  
IN McGinniss, Vincent D.

PA SCM Corp., USA

SO Fr. Demande, 32 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	FR 2286868	A1	19760430	FR 1974-33312	197410
					03
	FR 2286868	B3	19770715		

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PRAI FR 1974-33312

A 19741003 <--

AB Coatings based on acrylic polymers and epoxy resin vehicles, which cured rapidly to a nontacky surface on exposure to uv light or laser radiation, were prepd. by adding a synergistic mixt. of light sensitizers consisting of 0.05-3% 2,2'-dithiobis(benzothiazole) [120-78-5] or a halo deriv. of naphthalene, 0.1-2% of an arom. aminoketone or phenylketone, and  $\geq 0.5\%$  of an arom. photosensitizer with aldehyde or ketone groups to the coating vehicle. A acrylic acid-diglycidyl ether of bisphenol A polymer [52985-33-8] binder was prepd. and 30 parts was mixed with 30 parts 2-ethylhexyl acrylate and 30 parts pentaerythritol triacrylate to form an unsatd. coating vehicle. This vehicle was mixed with pigment and  $\alpha$ -chloromethylnaphthalene [86-52-2] 1.0, Michlers ketone [ 90-94-8] 0.5, and acetophenone [98-86-2] 0.5% were added. On exposure to a plasma arc a 0.012 mm thick film of this coating was completely dried in 0.15 sec and on exposure to uv lamps drying took 8.00 sec.

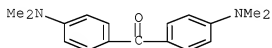
IT 90-94-8 119-61-9, uses and miscellaneous

530-44-9

(coatings contg., light-sensitive, rapid-drying)

RN 90-94-8 HCA

CN Methanone, bis[4-(dimethylamino)phenyl]- (CA INDEX NAME)



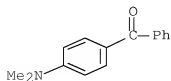
RN 119-61-9 HCA

CN Methanone, diphenyl- (CA INDEX NAME)



RN 530-44-9 HCA

CN Methanone, [4-(dimethylamino)phenyl]phenyl- (CA INDEX NAME)



IC C09D005-32  
 CC 42-4 (Coatings, Inks, and Related Products)  
 ST light sensitive acrylic coating; ketone light sensitizer  
 coating; aldehyde light sensitizer coating; halo naphthalene light  
 sensitizer coating; UV hardening coating; laser hardening coating  
 IT Polyamides, uses and miscellaneous  
 Siloxanes and Silicones, uses and miscellaneous  
 Urethane polymers, uses and miscellaneous  
 (acrylic coatings contg., light-sensitive  
 rapid-hardening)  
 IT Coating materials  
 (acrylic, light-sensitive, rapid-hardening)  
 IT Laser radiation, chemical and physical effects  
 (hardening by, of acrylic coatings contg. light  
 sensitizers)  
 IT Crosslinking  
 (of acrylic coatings contg. light sensitizers, by  
 light)  
 IT 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-  
 propenyl)oxy]methyl]-1,3-propanediyl ester, polymers with  
 phenoxyethyl acrylate and silicones  
 (coatings, light-sensitive, rapid-drying)  
 IT 81-04-9 82-86-0 84-11-7 86-52-2 90-47-1 90-94-8  
 91-56-5 93-55-0 98-86-2, uses and miscellaneous 100-52-7, uses  
 and miscellaneous 119-61-9, uses and miscellaneous  
 120-78-5 134-81-6 431-03-8 486-25-9 492-21-7  
 530-44-9 644-13-3 1733-76-2 3163-27-7 17078-27-2  
 22711-20-2 26588-36-3 28602-27-9  
 (coatings contg., light-sensitive, rapid-drying)  
 IT 16929-31-0D, 2-Propenoic acid, 2-phenoxyethyl ester, polymers with  
 pentaerythritol triacrylate and silicones 52985-33-8  
 54779-14-5 60653-44-3 60653-45-4 60653-46-5 60766-04-3  
 (coatings, light-sensitive, rapid-drying)

L74 ANSWER 14 OF 15 HCA COPYRIGHT 2008 ACS on STN

AN 83:28904 HCA Full-text

OREF 83:4642h,4643a

TI Acrylate system for uv curing. I. Light  
 sources and photoinitiators

AU McGinniss, Vincent D.

CS Glidden-Durkee Div., SCM Corp., Strongsville, OH, USA

SO Journal of Radiation Curing (1975), 2(1), 3-4, 6-13

CODEN: JRDCA3; ISSN: 0361-6428

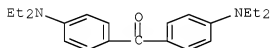
DT Journal



LA English  
 AB As light sources for photocuring of coatings, a 2-bulb Hg lamp and a plasma arc radiation system (PARS) were studied. The actual efficiency of a Hg lamp was probably greater than a PARS unit, but the PARS delivered more energy to the reaction cell. The kinetics of photopolymerization of Me methacrylate [80-62-6] showed half order dependence on the concn. of the initiator, i.e. Vazo 64 (azobisisobutyronitrile) [78-67-1], benzoin Bu ether [22499-11-2], 1-phenyl-1,2-propanedione 2-O-benzoyloxime [17292-57-8], 2,2-diethoxyacetophenone [6175-45-7], or Vicure (benzoin [119-53-9] alkyl ethers). The systems also showed half order dependence on amine synergist concn., and the rate of polymn. was in the order methyl-diethanolamine [105-59-9] > than dimethylethanolamine [108-01-0] > triethanolamine [102-71-6] > Et3N [121-44-8]. 4,4'-Bis(diethylamino)benzophenone [90-93-7] and benzophenone [119-61-9] formed free radicals via electron transfer mechanisms which were discussed in relation to Me methacrylate photopolymn.

IT 90-93-7 119-61-9, uses and miscellaneous  
 (catalysts, for polymn., of Me methacrylate, kinetics of)

RN 90-93-7 HCA  
 CN Methanone, bis[4-(diethylamino)phenyl]- (CA INDEX NAME)



RN 119-61-9 HCA  
 CN Methanone, diphenyl- (CA INDEX NAME)



CC 36-4 (Plastics Manufacture and Processing)  
 ST methacrylate UV polymn; catalyst methacrylate photopolymn; coating photocuring  
 IT Coating materials  
 (methyl methacrylate polymers, uv light curing of, kinetics of)  
 IT Kinetics of polymerization  
 (of Me methacrylate coatings, photochem., in presence

of initiators)  
 IT 55840-77-2  
 (catalyst, for polymn. of methyl methacrylate)  
 IT 78-67-1 119-53-9D, Ethanone, 2-hydroxy-1,2-diphenyl-, alkyl ethers  
 6175-45-7 17292-57-8 22499-11-2  
 (catalyst, for polymn., of methyl methacrylate)  
 IT 90-93-7 119-61-9, uses and miscellaneous  
 (catalysts, for polymn., of Me methacrylate, kinetics  
 of)  
 IT 102-71-6, uses and miscellaneous 105-59-9 108-01-0 121-44-8,  
 uses and miscellaneous  
 (photopolymn. of Me methacrylate in presence of,  
 kinetics of)

L74 ANSWER 15 OF 15 HCA COPYRIGHT 2008 ACS on STN

AN 82:172733 HCA Full-text

OREF 82:27627a,27630a

TI Ultraviolet and laser curing of pigmented polymerizable  
 binders

IN McGinniss, Vincent D.

PA SCM Corp.

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 3847771	A	19741112	US 1973-346351	197303 30
				<--	
	CA 1008013	A1	19770405	CA 1974-196130	197403 27

PRAI US 1973-346351 A 19730330 <--

AB Acrylic copolymer binders contg. opacifying pigments were rapidly  
 cured by uv radiation in the presence of synergistic amts. of 2,2'-  
 dithiobis(benzothiazole) (I) [120-78-5], an arom. amine carbonyl  
 compd., and an arom. carbonyl compd. Thus, 2-ethylhexyl acrylate 30,  
 pentaerythritol triacrylate 30, and DER 332 diacrylate 30 parts were  
 mixed and ground with TiO2 to give pigmented polymerizable binder  
 compn. About 1% each of I and Michler's Ketone [ 90-94-8] were  
 added, the mixt. was applied to a steel panel, and crosslinked  
 copolymer [55004-13-2] coating was formed in 0.1 sec when exposed to

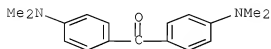
a plasma arc radiation source (PARS), and in 7 sec when exposed to 2 4000 W Hg lamps.

IT 90-94-8

(photosensitizers, for acrylic polymer coatings)

RN 90-94-8 HCA

CN Methanone, bis[4-(dimethylamino)phenyl]- (CA INDEX NAME)



IC C08D; C08F

INCL 204159240

CC 42-10 (Coatings, Inks, and Related Products)

ST polyacrylate thiobenzothiazole UV crosslinking; Michlers  
Ketone UV crosslinking; coating polyacrylate crosslinking

IT Siloxanes and Silicones, uses and miscellaneous  
(acrylated, polymer with acrylic resins, for  
coatings)

IT Soybean oil  
(acrylated, polymer with cyclohexyl acrylate  
and 1,6-hexanediol diacrylate, coatings)

IT Coating materials  
(pigmented acrylic polymers, cured by uv  
light, sensitizers for)

IT 2-Propenoic acid, 1,6-hexanediyl ester, polymer with cyclohexyl  
acrylate and acrylated soybean oil  
2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-  
propanediyl ester, polymer with acrylated resin compn.  
and benzil acrylate

2-Propenoic acid, 2-ethylhexyl ester, polymer with glycidyl  
acrylate-polyester and propylene glycol  
diacrylate

2-Propenoic acid, cyclohexyl ester, polymer with hexanediol  
diacrylate and acrylated soybean oil

2-Propenoic acid, oxiranylmethyl ester, polyester-, polymer with  
2-ethylhexyl acrylate and propylene glycol  
diacrylate

2-Propenoic acid, phenylmethyl ester, polymer with acrylated  
resin and trimethylol propane triacrylate

2-Propenoic acid, 1-methyl-1,2-ethanediyl ester, polymer with  
2-ethylhexyl acrylate and glycidyl acrylate  
-Polyester

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol, polymer

with ethylene glycol dimethacrylate and  
methacrylated polyamide  
(coatings, cured by uv light, sensitizers for)

IT 16929-31-0D, 2-Propenoic acid, 2-phenoxyethyl ester, polymer with  
acrylated silicone resin 54779-14-5 55004-13-2  
(coatings, cured by uv light, sensitizers for)

IT 82-86-0 84-11-7 90-47-1 100-10-7 100-52-7, uses and  
miscellaneous 134-81-6 644-13-3 17078-27-2  
(photosensitizers, contg. dithiobis(benzothiazole), for  
curing acrylic polymer coatings)

IT 90-94-3 120-78-5  
(photosensitizers, for acrylic polymer coatings)

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FORMULA (IV)

=> D L82 1-7 BIB ABS HITSTR HITIND

L82 ANSWER 1 OF 7 HCA COPYRIGHT 2008 ACS on STN  
AN 139:351321 HCA Full-text  
TI Incorporable photoinitiator for curing resins  
IN Wolf, Jean-Pierre; Huesler, Rinaldo; Peter, Wolfgang; Sommerlade,  
Reinhard; Boulmaaz, Souad  
PA Ciba Specialty Chemicals Holding Inc., Switz.  
SO PCT Int. Appl., 61 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2003091287	A1	20031106	WO 2003-EP4035	200304 17

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GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,

ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
NE, SN, TD, TG

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AU 2003233984	A1	20031110	AU 2003-233984	200304 17
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EP 1499645	A1	20050126	EP 2003-727317	200304 17
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AT 320452	T	20060415	AT 2003-727317	200304 17
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ES 2259413	T3	20061001	ES 2003-727317	200304 17
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RU 2320641	C2	20080327	RU 2004-134570	200304 17
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ZA 2004007897	A	20060222	ZA 2004-7897	

200409  
30

MX 2004PA10254 A 20050203 <-- MX 2004-PA10254

200410  
18

US 20050228062 A1 20051013 <-- US 2004-512300

200410  
21

IN 2004CN02664 A 20070720 <-- IN 2004-CN2664

200411  
25

PRAI CH 2002-717 A 20020426 <--  
WO 2003-EP4035 W 20030417

OS MARPAT 139:351321

AB The compds. PhCOCO2YR1, where Y is C3-12-alkylene, butenylenes, butynylene, or C4-12 alkylene interrupted one or more times by non-consecutive O or NR2; R1 is a reactive group selected from OH, SH, NR3R4, (CO)OH, (CO)NH2, SO3H, CR5:CR6R7, oxiranyl, O(CO)NHR8NCO and O(CO)R9(CO)X; R2 is H, C1-4-alkyl or C2-4 hydroxyalkyl; R3 and R4 are each independently of the other hydrogen, C1-4-alkyl or C2-4-hydroxyalkyl; R5, R6 and R7 are each independently of the others hydrogen or methyl; R8 is, for example, linear or branched C4-12alkylene, or phenylene; R9 is, for example, linear or branched C1-16alkylene, CH=CH, CH=CH-CH2, C6-cycloalkylene, phenylene or naphthylene; and X, X1 and X2 are each independently of the others OH, Cl, OCH3 or OC2H5; are suitable as photoinitiators that can be incorporated in a formulation to be cured. Phenylglyoxylic acid (2-hydroxyethoxy)ethyl ester was prep'd. and used to cure a compn. contg. Ebecryl 604 and Sartomer SR 344.

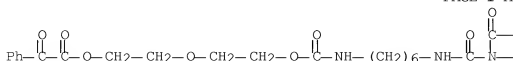
IT 619325-80-3P

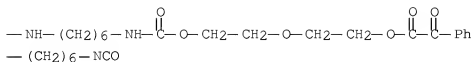
(incorporable photoinitiator for curing resins)

RN 619325-80-3 HCA

CN 2,9,11,13,20-Pentaazaheneicosanedioic acid, 11-(6-isocyanatoheptyl)-10,12-dioxo-, bis[2-[2-[(oxophenylacetyl)oxy]ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A





- IC ICM C08F002-50
- ICS G03F007-031; C09D004-00
- CC 37-2 (Plastics Manufacture and Processing)
- IT Inks
  - (flexog.; incorporable photoinitiator for curing resins)
- IT Coating materials
  - (gel coats; incorporable photoinitiator for curing resins)
- IT Electric cables
  - (glass fiber-based coatings for; incorporable photoinitiator for curing resins)
- IT Adhesives
  - Coating materials
  - Dental materials and appliances
  - Holography
  - Magnetic recording materials
  - Optical filters
  - Optical switches
  - Optical waveguides
  - Printing plates
  - Resists
  - Stereolithography
    - (incorporable photoinitiator for curing resins)
- IT Inks
  - (lithog.; incorporable photoinitiator for curing resins)
- IT Crosslinking catalysts
  - (photochem., incorporable; incorporable photoinitiator for curing resins)
- IT Coating materials
  - (powder; incorporable photoinitiator for curing resins)
- IT Inks
  - (printing; incorporable photoinitiator for curing resins)

resins)  
 IT Inks  
     (silk-screen; incorporable photoinitiator for curing  
     resins)  
 IT 442536-99-4P 619325-76-7P 619325-77-8P 619325-78-9P  
 619325-79-0P 619325-80-3P 619325-81-4P 619325-82-5P  
 619325-83-6P  
     (incorporable photoinitiator for curing resins)  
 IT 619325-84-7P 619325-85-8P  
     (incorporable photoinitiator for curing resins)  
 IT 3681-00-3P, Diethylene glycol monoglycidyl ether  
     (incorporable photoinitiator for curing resins)  
 IT 106-89-8, Epichlorohydrin, reactions 111-46-6, Diethylene glycol,  
 reactions 4098-71-9, Isophorone diisocyanate 9016-87-9, Desmodur  
 VL 15206-55-0, Phenylglyoxylic acid methyl ester 104559-01-5,  
 Desmodur N 3300 116243-07-3, Desmodur N 3200 165169-07-3,  
 DesmodurN 3400  
     (incorporable photoinitiator for curing resins)  
 RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 2 OF 7 HCA COPYRIGHT 2008 ACS on STN  
 AN 136:201899 HCA Full-text  
 TI Process for producing coatings using siloxane photoinitiators  
 IN Baudin, Gisele; Jung, Tunja  
 PA Ciba Specialty Chemicals Holding Inc., Switz.  
 SO PCT Int. Appl., 110 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002014439      A3      20020613

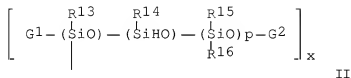
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 NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,  
 TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,



	TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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PRAI EP 2000-810720	A	20000814	<--		

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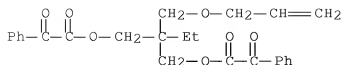
AB Compds.  $[[\text{R}(\text{CO})_2\text{O}]\text{rY}]\text{sA}$  (I) in which  $r = 1$  or  $2$ ;  $s = 1-1000$ ;  $\text{R} =$  substituted Ph radical C6R1-5; or  $\text{R}$  is, e.g., unsubstituted or substituted naphthyl, anthracyl, phenanthryl or a heterocyclic radical; R1-5 = H; unsubstituted or substituted Ph or C1-12-alkyl;  $\text{A}$ , if  $s = 1$ , is a surface-active radical of II; or  $\text{A}$ , if  $s = 1$ , is a surface-active radical A0; or  $\text{A}$ , if  $s > 1$ , is a radical II in which  $n$  corresponds to the no.  $s$ , or  $\text{A}$ , if  $s = 2$ , is a radical A1; A0 is, e.g., in each case unsubstituted or substituted C6-30-alkyl, C6-30-alkenyl, C6-30-alkynyl or C6-30-aralkyl; A1 = unsubstituted or substituted C6-C30 alkylene, C6-C30 alkenylene, C6-C30 alkynylene or C6-C30 aralkylene;  $n = 1-1000$ ;  $m = 0-100$ ;  $p = 0-10,000$ ;  $x = 1-10$ ;  $\text{Y}$ , if  $r = 1$ , is a divalent group and  $\text{Y}$ , if  $r = 2$ , is a trivalent group, and  $\text{Y}$ , if  $\text{A}$  has the definition A0, is a single bond; G1, G2, R13-22 = C1-18-alkyl; are particularly suitable as photoinitiators which accumulate at the surface in a process for curing coatings. Compds. I can be used as flow improvers. Thus, but-3-enyl glyoxalate (prepn. given) and 1,1,1,3,5,5,5- heptamethyltrisiloxane were heated (1:1 mol equiv.) at  $100^\circ$  for 20 h in the presence of Pt catalyst to give a photoinitiator. This photoinitiator (2%) was introduced into a polyurethane acrylate coating formulation and after UV cure gave a test coating having Koenig pendulum hardness 141 s and water contact angle  $95^\circ$ .

II 400728-43-0P 400728-44-1P 400728-45-2P

(hydrosilation; siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

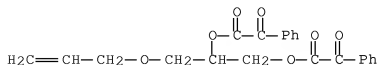
RN 400728-43-0 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 2-ethyl-2-[(2-propenyloxy)methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)



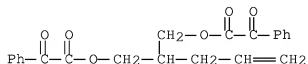
RN 400728-44-1 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1-[(2-propenyloxy)methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)



RN 400728-45-2 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 2-(2-propenyl)-1,3-propanediyl ester (9CI) (CA INDEX NAME)



IT 400728-48-5P 400728-50-9P 400728-54-3P

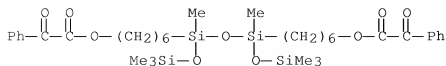
400728-55-4P 400728-60-1P 400728-61-2P

400728-64-5P 400728-65-6P 400728-67-8P

(siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

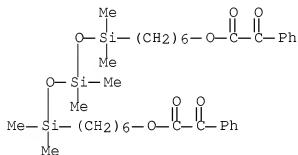
RN 400728-48-5 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, [1,3-dimethyl-1,3-bis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]di-6,1-hexanediyl ester (9CI) (CA INDEX NAME)



RN 400728-50-9 HCA

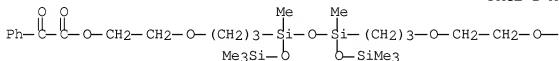
CN Benzeneacetic acid,  $\alpha$ -oxo-, (1,1,3,3,5,5-hexamethyl-1,5-trisiloxanediyl)di-6,1-hexanediyl ester (9CI) (CA INDEX NAME)



RN 400728-54-3 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, [1,3-dimethyl-1,3-bis[(trimethylsilyl)oxyl]-1,3-disiloxanediyl]bis(3,1-propanediyl-2,1-ethanediyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A

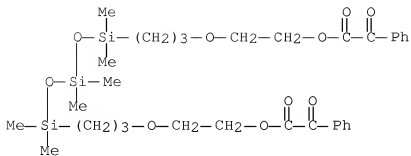


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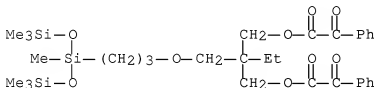
RN 400728-55-4 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, (1,1,3,3,5,5-hexamethyl-1,5-trisiloxanediyl)bis(3,1-propanediyl-2,1-ethanediyl) ester (9CI) (CA INDEX NAME)



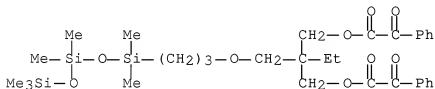
RN 400728-60-1 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 2-ethyl-2-[[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy)methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)



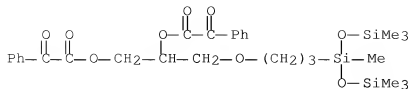
RN 400728-61-2 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 2-ethyl-2-[[[3-(heptamethyltrisiloxanyl)propoxy]methyl]-1,3-propanediyl ester (9CI)  
(CA INDEX NAME)



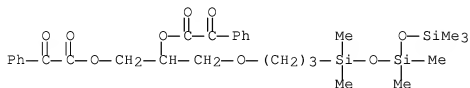
RN 400728-64-5 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1-[ [3-[1,3,3,3-tetramethyl-1-  
[ (trimethylsilyl)oxy]disiloxanyl]propoxy]methyl]-1,2-ethanediyl  
ester (9CI) (CA INDEX NAME)



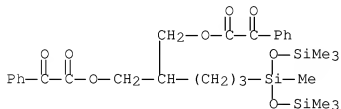
RN 400728-65-6 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1-[[3-(heptamethyltrisiloxanyl)propoxy]methyl]-1,2-ethanediyl ester (9CI)  
(CA INDEX NAME)



RN 400728-67-8 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 2-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl]-1,3-propanediyl ester (9CI)  
(CA INDEX NAME)

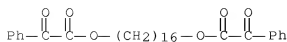


IT 400728-72-5P 400728-73-6P 400728-76-9P

(siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

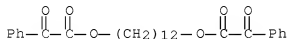
RN 400728-72-5 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1,16-hexadecanediyl ester (9CI)  
(CA INDEX NAME)



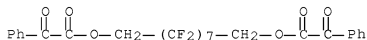
RN 400728-73-6 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1,12-dodecanediyl ester (9CI) (CA INDEX NAME)



RN 400728-76-9 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8-tetradecafluoro-1,9-nonanediyl ester (9CI) (CA INDEX NAME)



IC ICM C09D004-00

ICS C08F002-50; C07C069-738; G03F007-031; C09D007-06

CC 42-3 (Coatings, Inks, and Related Products)

Section cross-reference(s): 67

ST siloxane photoinitiator curing coating; aroylformic acid ester siloxane reaction product photoinitiator

IT Polyurethanes, uses

(acrylates, cured coating; siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

IT Polysiloxanes, uses

(di-Me, 3-hydroxypropyl Me, ethoxylated, reaction products with glyoxalic acid and carbonyldiimidazole; siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

IT Polysiloxanes, uses

(oligomeric, reaction products with glyoxalic acid; siloxane surface-active photoinitiators for curing to produce

scratch-resistant coatings)

IT Crosslinking catalysts  
(photochem.; siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

IT Coating materials  
(scratch-resistant; siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

IT 400655-57-4P 400726-77-4P  
(cured coating; siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

IT 175853-79-9P 187095-97-2P 400728-39-4P 400728-40-7P  
400728-41-8P 400728-42-9P 400728-43-0P  
400728-44-1P 400728-45-2P  
(hydrosilation; siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

IT 298-12-4DP, Glyoxalic acid, reaction products with alkenyl-terminated siloxane 530-62-1DP, 1,1'-Carbonyldiimidazole, reaction products with alkenyl-terminated siloxane 400728-46-3P  
400728-47-4P 400728-48-5P 400728-50-9P  
400728-51-0P 400728-52-1P 400728-53-2P 400728-54-3P  
400728-55-4P 400728-56-5P 400728-57-6P 400728-58-7P  
400728-59-8P 400728-60-1P 400728-61-2P  
400728-62-3P 400728-63-4P 400728-64-5P  
400728-65-6P 400728-66-7P 400728-67-8P  
400728-68-9P 400728-69-0P  
(siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

IT 400728-70-3P 400728-71-4P 400728-72-5P  
400728-73-6P 400728-74-7P 400728-76-9P  
(siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

IT 111-45-5, 2-(Allyloxy)ethanol 112-92-5, Octadecanol 123-34-2, 3-Allyloxy-1,2-propanediol 557-61-9, 1-Octacosanol 611-73-4, Benzoylformic acid 627-27-0, 3-Buten-1-ol 678-39-7, 1H,1H,2H,2H-Perfluorodecan-1-ol 682-09-7, Trimethylolpropane diallyl ether 682-11-1, Trimethylolpropane monoallyl ether 821-41-0, 5-Hexen-1-ol 1189-93-1, 1,1,3,3,5,5-Hexamethyltrisiloxane 1471-17-6, Pentaerythritol triallyl ether 2883-45-6, 1,6-Heptadien-4-ol 2895-07-0, 1,1,1,3,3,5,5-Heptamethyltrisiloxane 5675-51-4, 1,12-Dodecanediol 7735-42-4, 1,16-Hexadecanediol 15206-55-0, Methyl benzoylformate 16066-09-4, 1,1,1,3,3,5,7,7-Octamethyltetrasiloxane 42201-43-4, 2-Allylpropane-1,3-diol 203303-01-9  
(siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)



AN 136:201898 HCA Full-text  
 TI Compounds, composition, producing coatings using siloxane  
 photoinitiators and compounds as flow improvers  
 IN Baudin, Gisele; Jung, Tunja  
 PA Ciba Specialty Chemicals Holding Inc., Switz.  
 SO PCT Int. Appl., 86 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2002014326	A1	20020221	WO 2001-EP9122	200108 07
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	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
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TW	557298	B	20031011	TW 2001-90118686	200107 31
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CA	2416325	A1	20020221	CA 2001-2416325	200108 07
				<--	
AU	2001083989	A	20020225	AU 2001-83989	200108 07
				<--	
EP	1309599	A1	20030514	EP 2001-962915	200108 07
				<--	
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BR	2001013221	A	20030624	BR 2001-13221	200108

JP 2004506639 T 20040304 JP 2002-519464

200108  
07

US 20040014832 A1 20040122 US 2003-343617

200302  
03

US 6906113 B2 20050614  
MX 2003PA01093 A 20030527 MX 2003-PA1093

200302  
04

PRAI EP 2000-810721 A 20000814 <--  
WO 2001-EP9122 W 20010807 <--

OS MARPAT 136:201898

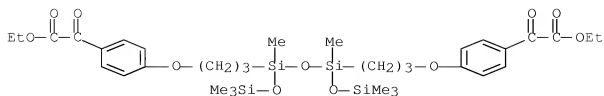
AB Compds. R(CO)2OY (I), R1COCOY1OCOCOR2, and YOCOCORbXA3X1RaCOCOY; R, R1-2 = substituted Ph, unsubstituted or substituted naphthyl, anthracyl, phenanthryl or a heterocyclic radical; Ra, Rb = phenylene, naphthylene, anthracylene, phenanthrylene or a divalent heterocyclic radical, these radicals being unsubstituted or substituted; A3 = siloxane surface active radical; X, X1 = if A3 is siloxane radical, single bond, hydrocarbylene optionally interrupted by heteroatoms O and N; Y = H, hydrocarbyl, optionally substituted with siloxane radical or salt of glyoxalic acid; Y1 = hydrocarbylene, optionally substituted with siloxane radical or heteroatom-contg. linking groups, are particularly suitable as photoinitiators which accumulate at the surface in a process for curing coatings. Compds. I can be used as flow improvers. I [Y = Et; R = C6R3-7 where R3, R4, R6, R7 = H and R5 = AX; A = siloxane radical G1(OSiMe)nG2 where n = 1; G1 = OSi(CH3)2; G2 = Si(CH3)3; X = (CH2)30] was prepd. This photoinitiator (2%) was introduced into a polyurethane acrylate coating formulation and after UV cure gave a test coating having Koenig pendulum hardness 134 s and water contact angle 83 °.

IT 400655-55-2P

(siloxane surface-active photoinitiators for curing to produce scratch-resistant coatings)

RN 400655-55-2 HCA

CN Benzeneacetic acid, 4,4'-[[1,3-dimethyl-1,3-bis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]bis(3,1-propanediyl)oxy]]bis[α-oxo-, diethyl ester (9CI) (CA INDEX NAME)



- IC ICM C07F007-08  
ICS C08L083-06; C08F002-50; C07C069-716
- CC 42-3 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 67
- ST aroylformic acid ester siloxane reaction product photoinitiator;  
siloxane photoinitiator curing coating
- IT Polyurethanes, uses  
(acrylates, cured coating; siloxane  
surface-active photoinitiators for curing to produce  
scratch-resistant coatings)
- IT Crosslinking catalysts  
(photochem.; siloxane surface-active photoinitiators for  
curing to produce scratch-resistant coatings)
- IT Coating materials  
(scratch-resistant; siloxane surface-active photoinitiators for  
curing to produce scratch-resistant coatings)
- IT 400655-57-4P 400726-77-4P  
(cured coating; siloxane surface-active photoinitiators  
for curing to produce scratch-resistant coatings)
- IT 125575-32-8P  
(intermediate photoinitiator; siloxane surface-active  
photoinitiators for curing to produce scratch-resistant  
coatings)
- IT 222631-68-7P 400655-54-1P  
(photoinitiator; siloxane surface-active photoinitiators for  
curing to produce scratch-resistant coatings)
- IT 70080-54-5P  
(prepn. and addn. reaction; siloxane surface-active  
photoinitiators for curing to produce scratch-resistant  
coatings)
- IT 400655-55-2P 400655-56-3P  
(siloxane surface-active photoinitiators for curing to  
produce scratch-resistant coatings)
- IT 68758-68-9P, Ethyl 4-hydroxymandelate  
(siloxane surface-active photoinitiators for curing to  
produce scratch-resistant coatings)
- IT 64-17-5, Ethanol, reactions 106-95-6, Allyl bromide, reactions

1198-84-1, 4-Hydroxymandelic acid 1873-88-7, 1,1,1,3,5,5,5-  
 Heptamethyltrisiloxane 2131-18-2, Pentadecylbenzene 5781-53-3,  
 Oxalic acid monomethyl ester chloride 6938-66-5 16066-09-4,  
 1,1,1,3,5,7,7,7-Octamethyltetrasiloxane

(siloxane surface-active photoinitiators for curing to  
 produce scratch-resistant coatings)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 4 OF 7 HCA COPYRIGHT 2008 ACS on STN

AN 133:267220 HCA Full-text

TI Use of phenylglyoxylic acid esters as photo initiators for outdoor  
 powder coatings

IN Schwalm, Reinhold; Koeniger, Rainer

PA BASF A.-G., Germany

SO Ger. Offen., 8 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	DE 19913353	A1	20000928	DE 1999-19913353	199903 24
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	WO 2000056822	A1	20000928	WO 2000-EP2609	200003 23
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	W: JP, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP	1165704	A1	20020102	EP 2000-922544	200003 23
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EP	1165704	B1	20040602		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP	2002540243	T	20021126	JP 2000-606682	200003 23
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AT	268364	T	20040615	AT 2000-922544	200003

US 6562464

B1

20030513

US 2001-926194

200109

21

PRAI DE 1999-19913353

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19990324

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WO 2000-EP2609

W

20000323

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OS MARPAT 133:267220

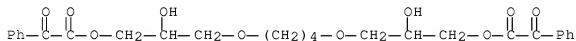
AB Phenylglyoxylic acid diesters with dioles R1COCO2ZO2CCOR1 [I; R1 = (un)substituted Ph; Z = p-CH2C6H10CH2, CH2C(CH2OR2)2CH2, etc.; R2 = H, COCOR1], their use for the title purpose, photo-curable powder coating compns. contg. I, a process for coating surfaces and a coated substrate are claimed. I are less volatile and less prone to yellowing than the previous art photoinitiators. Thus, 204.2 parts isophorone diisocyanate and 0.3 parts dibutyltin dilaurate were added at 60° to a mixt. of hydroxyethyl methacrylate 91.64, butanediol 36.00 and trimethylolpropane 11.80 parts, after a spontaneous warm-up to 110° the mixt. was heated for 10 min at 135° and cooled to 100°. The copolymer was treated with 11.00 parts cyclohexanedimethanol di(phenylglyoxylate) ester (prepn. given), the mixt. was cooled to ambient temp. and comminuted, the 40-μm-fraction was electrostatically deposited on a metal substrate, IR-heated to 130° and UV-irradiated at 40 m/min to give a solvent-resistant coating.

IT 296760-55-9F

(use of phenylglyoxylic acid esters as photo initiators for outdoor powder coatings)

RN 296760-55-9 HCA

CN Benzeneacetic acid, α-oxo-, 1,4-butanediylbis[oxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)



IC ICM C07C069-738

ICS C08K005-12; G03F007-028

CC 35-3 (Chemistry of Synthetic High Polymers)

ST UV curable powder coating phenylglyoxylate ester manuf photopolymn initiator; phenylglyoxylic acid esterification polyhydric alc UV photopolymn initiator manuf; photopolymn UV initiator manuf phenylglyoxylate diol ester; cyclohexanedimethanol phenylglyoxylate diester prepn photopolymn initiator powder coating

IT Polyurethanes, processes

- (acrylates, crosslinked coatings; use of phenylglyoxylic acid esters as photo initiators for outdoor powder coatings)
- IT Coating materials  
(photocurable, powder; use of phenylglyoxylic acid esters as photo initiators for outdoor)
- IT Coating materials  
(powder, photocurable; use of phenylglyoxylic acid esters as photo initiators for outdoor)
- IT 296760-57-1P, 1,4-Butanediol-2-Hydroxyethyl methacrylate  
-Isophorone diisocyanate-Trimethylolpropane copolymer  
(UV-crosslinked; use of phenylglyoxylic acid esters as photo initiators for outdoor powder coatings)
- IT 255728-71-3, Laromer LR 8987  
(UV-cured film; use of phenylglyoxylic acid esters as photo initiators for outdoor powder coatings)
- IT 296760-54-8P 296760-55-9P 296760-56-0P  
(use of phenylglyoxylic acid esters as photo initiators for outdoor powder coatings)

L82 ANSWER 5 OF 7 HCA COPYRIGHT 2008 ACS on STN

AN 129:217322 HCA Full-text

TI Relative reactivities of radical photoinitiators measured using fluorescence cure monitoring

AU Hu, Shengkui; Neckers, Douglas C.; Popielarz, Roman; Specht, Kathleen G.

CS Center for Photochemical Sciences, Bowling Green State University, Bowling Green, OH, USA

SO RadTech Report (1998), 12(3), 27-29  
CODEN: RARPEH; ISSN: 1056-0793

PB RadTech International North America

DT Journal

LA English

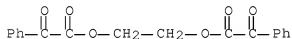
AB We describe a novel and widely applicable method for measuring the relative reactivities of radical photoinitiators. This method is based on monitoring the polymn. reaction of photocurable resin thin film using twisted intramol. charge transfer (TICT) fluorescence probes such as 5-dimethylaminonaphthalene-1-sulfonyl-n- butylamide (DASB). As the curing reaction proceeds, the fluorescence emission spectra of the TICT probe shifts hypsochromically because the increase in the matrix microviscosity makes it more difficult for the excited probe mol. to relax to its twisted charge transfer state. The changes in the fluorescence spectra were detected by a rapid scan fluorimeter and were expressed as the fluorescence intensity ratios at two wavelengths selected on each side of the max. emission wavelength. When the intensity at a short wavelength is divided by the intensity at a longer wavelength, the resulting ratio increases

monotonically with the polymn. progress. Real-time polymn. profiles were recorded by plotting the intensity ratios against irradsn. times. Relative initiation efficiencies of different photoinitiators can be derived from these kinetic profiles. Several com. initiators (six from the Irgacure series and two from the Darocur series) and new phenylglyoxylate initiators (eight compds., including one com. product, Me phenylglyoxylate) were studied in triethylene glycol diacrylate monomer. Initiation efficiencies of the com. initiators differ sharply, e.g., Irgacure 369 reacts about seven times more efficiently than Irgacure 907 in initiating polymn. Most of the phenylglyoxylates react with modest efficiencies.

IT 208263-29-0, Ethylene glycol diphenylglyoxylate  
(catalysts; relative reactivities of radical photoinitiators for poly(triethylene glycol diacrylate) measured fluorescence cure monitoring)

RN 208263-29-0 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1,2-ethanediyl ester (9CI) (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)

ST radical photoinitiator fluorescence cure monitoring;  
polytriethylene glycol diacrylate crosslinking  
photoinitiator

IT Crosslinking catalysts  
(photochem.; relative reactivities of radical photoinitiators for poly(triethylene glycol diacrylate) measured fluorescence cure monitoring)

IT 947-19-3, Irgacure 184 1603-79-8, Ethyl phenylglyoxylate  
7473-98-5, Darocur 1173 15206-55-0, Methyl phenylglyoxylate  
22964-15-4, 2-Chloroethyl phenylglyoxylate 25315-30-4,  
2-Bromoethyl phenylglyoxylate 62936-35-0, Phenyl phenylglyoxylate  
71868-10-5, Irgacure 907 95653-54-6 118690-08-7, Irgacure 500  
119313-12-1, Irgacure 369 174285-64-4, Irgacure 1700  
189146-15-4, Darocur 4265 197861-98-6, 2-Phenylthioethyl  
phenylglyoxylate 208263-29-0, Ethylene glycol  
diphenylglyoxylate  
(catalysts; relative reactivities of radical photoinitiators for poly(triethylene glycol diacrylate) measured fluorescence cure monitoring)

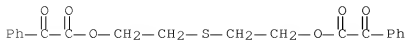
IT 1680-21-3, Triethylene glycol diacrylate

RE.CNT 6        THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

EP 956280                      B1              20021030  
R: BE, DE, DK, ES, FR, GB, IT, NL, SE

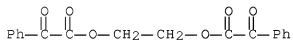


BR 9806940	A	20000328	BR 1998-6940	199801 23
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JP 2001511137	T	20010807	JP 1998-532509	199801 23
			<--	
TW 460450	B	20011021	TW 1998-87100902	199801 23
			<--	
ES 2184233	T3	20030401	ES 1998-905335	199801 23
			<--	
US 6048660	A	20000411	US 1998-14555	199801 28
			<--	
ZA 9800724	A	19980730	ZA 1998-724	199801 29
			<--	
PRAI CH 1997-195	A	19970130	<--	
WO 1998-EP351	W	19980123	<--	
OS MARPAT 129:176965				
AB	Nonvolatile R1C(O)CO2YOCOC(O)R2 (I, R1, R2 = aryl, Y = divalent group) are useful as photoinitiators for crosslinking compns. such as coatings contg. unsatd. compds. and polymers. A typical clearcoat compn. was prepd. by mixing Ebecryl 604 (epoxy acrylate) 89, Sartomer SR344 (polyethylene glycol diacrylate) 10, and Ebecryl 350 (silicone diacrylate ) 1 part with 2% I (R1, R2 = Ph, Y = CH2CH2).			
IT	188647-09-8P 208263-29-0P 211510-16-6P 211510-19-9P 211510-22-4P 211510-23-5P 211510-24-6P 211510-25-7P 211510-27-9P 211510-29-1P (nonvolatile bisarylglyoxalate esters for photoinitiators for crosslinkable compns.)			
RN	188647-09-8 HCA			
CN	Benzeneacetic acid, $\alpha$ -oxo-, thiodi-2,1-ethanediyl ester (9CI) (CA INDEX NAME)			



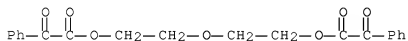
RN 208263-29-0 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1,2-ethanediyl ester (9CI) (CA INDEX NAME)



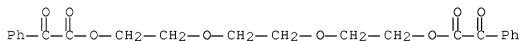
RN 211510-16-6 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1,1'-(oxydi-2,1-ethanediyl) ester (CA INDEX NAME)



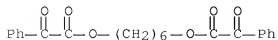
RN 211510-19-9 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1,2-ethanediylbis(oxy-2,1-ethanediyl) ester (9CI) (CA INDEX NAME)



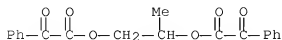
RN 211510-22-4 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1,6-hexanediyl ester (9CI) (CA INDEX NAME)



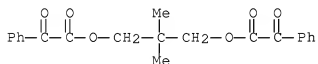
RN 211510-23-5 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 1-methyl-1,2-ethanediyl ester  
(9CI) (CA INDEX NAME)



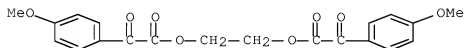
RN 211510-24-6 HCA

CN Benzeneacetic acid,  $\alpha$ -oxo-, 2,2-dimethyl-1,3-propanediyl ester  
(9CI) (CA INDEX NAME)



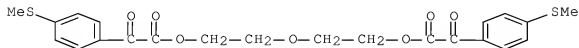
RN 211510-25-7 HCA

CN Benzeneacetic acid, 4-methoxy- $\alpha$ -oxo-, 1,2-ethanediyl ester  
(9CI) (CA INDEX NAME)



RN 211510-27-9 HCA

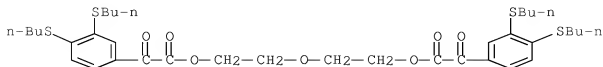
CN Benzeneacetic acid, 4-(methylthio)- $\alpha$ -oxo-,  
oxydi-2,1-ethanediyl ester (9CI) (CA INDEX NAME)



RN 211510-29-1 HCA

CN Benzeneacetic acid, 3,4-bis(butylthio)- $\alpha$ -oxo-,

oxydi-2,1-ethanediyl ester (9CI) (CA INDEX NAME)



IC ICM C07C069-76  
ICS G03F007-031

CC 42-3 (Coatings, Inks, and Related Products)

ST nonvolatile bisarylglyoxalate ester photoinitiator manuf; ethylene  
bisphenylglyoxalate photoinitiator manuf; acrylic epoxy  
clearcoat nonvolatile photocrosslinking catalyst

IT Polysiloxanes, uses  
(acrylate siloxanes, Ebecryl 350, coating crosslinker;  
nonvolatile bisarylglyoxalate esters for photoinitiators for  
crosslinkable compns.)

IT Polyesters, uses  
(acrylate-terminated, coating; nonvolatile  
bisarylglyoxalate esters for photoinitiators for crosslinkable  
compns.)

IT Epoxy resins, uses  
Polyurethanes, uses  
(acrylic, cured coating; nonvolatile  
bisarylglyoxalate esters for photoinitiators for crosslinkable  
compns.)

IT 141525-43-1P 211510-31-5P  
(cured coating; nonvolatile bisarylglyoxalate esters  
for photoinitiators for crosslinkable compns.)

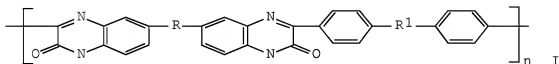
IT 188647-09-8P 208263-29-0P 211510-16-6P  
211510-19-9P 211510-20-2P 211510-21-3P  
211510-22-4P 211510-23-5P 211510-24-6P  
211510-25-7P 211510-27-9P 211510-29-1P  
(nonvolatile bisarylglyoxalate esters for photoinitiators for  
crosslinkable compns.)

IT 26570-48-9DP, polymers with silicone acrylates  
(prepn. of)

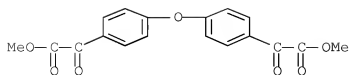
IT 79586-46-2DP, Ebecryl 604, polymers with silicone acrylates  
(silicone diacrylate-cured coating;  
nonvolatile bisarylglyoxalate esters for photoinitiators for  
crosslinkable compns.)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 7 OF 7 HCA COPYRIGHT 2008 ACS on STN  
 AN 111:24018 HCA Full-text  
 OREF 111:4201a,4204a  
 TI Poly(quinoxalones)  
 AU Labadie, Jeff W.; Woodling, Rick; Falcone, Sam  
 CS Almaden Res. Cent., IBM Res., San Jose, CA, 95120, USA  
 SO Polymeric Materials Science and Engineering (1989), 60,  
 532-6  
 CODEN: PMSEDG; ISSN: 0743-0515  
 DT Journal  
 LA English  
 GI

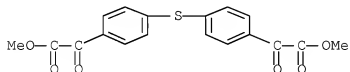


AB Poly(quinoxalones) (I, R = single bond, O, CO; R1 = O, S) prepd. by the acid catalyzed polymn. of bis ( $\alpha$ -ketoesters) and bis(o-diamines) were sol. in N-methylpyrrolidone as fully cyclized materials, precluding the need for high-temp. curing. The I had excellent dimensional and thermal stability, tough and ductile mech. properties, and glass transition temps. >375°. Hydrogen bonding between the amide moieties played a significant role in these properties. Model reactions of monoamines with  $\alpha$ -ketoesters occurred exclusively at the ketone carbonyl, indicating a predominance of one constitutional isomer in the polymn. reaction.  
 IT 118771-46-3P, Dimethyl 4,4'-(diphenyl ether)diglyoxalate  
 121386-61-6P  
 (prepn. and polymn. of)  
 RN 118771-46-3 HCA  
 CN Benzeneacetic acid, 4,4'-oxybis[ $\alpha$ -oxo-, dimethyl ester (9CI)  
 (CA INDEX NAME)



RN 121386-61-6 HCA

CN Benzeneacetic acid, 4,4'-thiobis[α-oxo-, dimethyl ester (9CI)  
(CA INDEX NAME)



IT 118771-47-4P 118771-48-5P 118771-49-6P

121398-29-6P 121398-30-9P 121398-31-0P

(prepn. of sol. heat-resistant, with tough ductile mech.  
properties)

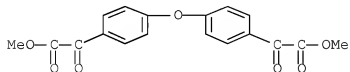
RN 118771-47-4 HCA

CN Benzeneacetic acid, 4,4'-oxybis[α-oxo-, dimethyl ester,  
polymer with [1,1'-biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX  
NAME)

CM 1

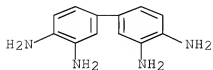
CRN 118771-46-3

CMF C18 H14 O7



CM 2

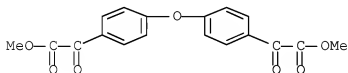
CRN 91-95-2  
CMF C12 H14 N4



RN 118771-48-5 HCA  
CN Benzeneacetic acid, 4,4'-oxybis[ $\alpha$ -oxo-, dimethyl ester,  
polymer with bis(3,4-diaminophenyl)methanone (9CI) (CA INDEX NAME)

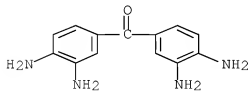
CM 1

CRN 118771-46-3  
CMF C18 H14 O7



CM 2

CRN 5007-67-0  
CMF C13 H14 N4 O



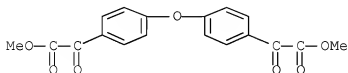
RN 118771-49-6 HCA

CN Benzeneacetic acid, 4,4'-oxybis[ $\alpha$ -oxo-, dimethyl ester,  
polymer with 4,4'-oxybis[1,2-benzenediamine] (9CI) (CA INDEX NAME)

CM 1

CRN 118771-46-3

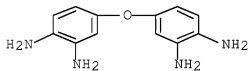
CMF C18 H14 O7



CM 2

CRN 2676-59-7

CMF C12 H14 N4 O



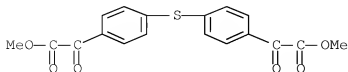
RN 121398-29-6 HCA

CN Benzeneacetic acid, 4,4'-thiobis[ $\alpha$ -oxo-, dimethyl ester,  
polymer with [1,1'-biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX  
NAME)

CM 1

CRN 121386-61-6

CMF C18 H14 O6 S

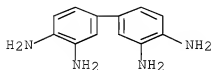




CM 2

CRN 91-95-2

CMF C12 H14 N4



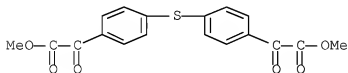
RN 121398-30-9 HCA

CN Benzeneacetic acid, 4,4'-thiobis[ $\alpha$ -oxo-, dimethyl ester, polymer with bis(3,4-diaminophenyl)methanone (9CI) (CA INDEX NAME)

CM 1

CRN 121386-61-6

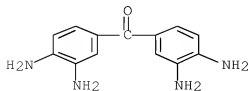
CMF C18 H14 O6 S



CM 2

CRN 5007-67-0

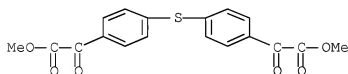
CMF C13 H14 N4 O



RN 121398-31-0 HCA  
 CN Benzeneacetic acid, 4,4'-thiobis[ $\alpha$ -oxo-, dimethyl ester,  
 polymer with 4,4'-oxybis[1,2-benzenediamine] (9CI) (CA INDEX NAME)

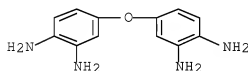
CM 1

CRN 121386-61-6  
 CMF C18 H14 O6 S



CM 2

CRN 2676-59-7  
 CMF C12 H14 N4 O



CC 35-5 (Chemistry of Synthetic High Polymers)  
 IT 118771-46-3P, Dimethyl 4,4'-(diphenyl ether)diglyoxalate  
 121386-61-6P  
 (prepn. and polymn. of)  
 IT 118771-47-4P 118771-48-5P 118771-49-6P  
 118899-65-3P 118899-66-4P 118899-67-5P 121383-56-0P  
 121383-57-1P 121398-29-6P 121398-30-3P  
 121398-31-0P 126902-28-1P  
 (prepn. of sol. heat-resistant, with tough ductile mech.  
 properties)

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FORMULA (V)

=> D L90 1-2 BIB ABS HITSTR HITIND

L90 ANSWER 1 OF 2 HCA COPYRIGHT 2008 ACS on STN

AN 137:202031 HCA Full-text

TI Preparation and patterning process of silicon-containing chemical amplification positive resist compositions

IN Takeda, Takanobu; Hatakeyama, Jun; Ishihara, Toshinobu; Kubota, Tohru; Kubota, Yasufumi

PA Shin-Etsu Chemical Co., Ltd., Japan

SO Eur. Pat. Appl., 33 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 1236745	A2	20020904	EP 2002-251419	20020228
				<--	
	EP 1236745	A3	20040324		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2002348332	A	20021204	JP 2002-47351	20020225
				<--	
	JP 3915895	B2	20070516		
	TW 245774	B	20051221	TW 2002-91103644	20020227
				<--	
	US 20020168581	A1	20021114	US 2002-85935	20020301
				<--	
	US 6994945	B2	20060207		
PRAI	JP 2001-56543	A	20010301	<--	

AB Novel silicon-contg. polymers, which are obtained by copolyng. vinylsilane with a compd. having a low electron d. unsatd. bond such as maleic anhydride, maleimide derivs. or tetrafluoroethylene, are suitable as the base resin in chem. amplified pos. resist compns. used for micropatterning in a process for the fabrication of semiconductor devices. The resist compns., which are sensitive to high-energy radiation, such as deep-UV light, laser beams, electron beams or X-rays, can form high aspect ratio patterns with high sensitivity and resolu. as well as improved resistance to oxygen or halogen gas plasma etching. Thus, maleic anhydride and trimethylvinylsilane were polymd. in THF using radical polymn. technique; the silicone polymer, photoacid generator, dissoln. inhibitor were thoroughly dissolved in propylene glycol monomethyl ether acetate; the resist soln. was spin coated onto cured DUV-30/novolac resist substrate and then baked at 100° for 90 s to form a resist film of 0.2  $\mu$ m, followed by exposing to laser beam, baking at 100° for 90 s, and developing in TMAH to obtain a pos. pattern; the resist pattern was then evaluated in sensitivity, resolu., and etc.

IT 66003-76-7  
(photoacid generator; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)

RN 66003-76-7 HCA

CN Iodonium, diphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 37181-39-8

CMF C F3 O3 S



CM 2

CRN 10182-84-0

CMF C12 H10 I



IC ICM C08F030-08  
 ICS G03F007-075; C08G077-00  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38, 76  
 IT 66003-76-7 66003-78-9  
 (photoacid generator; silicon-contg. chem. amplification pos.  
 resist compns. and patterning process thereof)

L90 ANSWER 2 OF 2 HCA COPYRIGHT 2008 ACS on STN  
 AN 136:188024 HCA Full-text  
 TI Curable slurries containing ceramic powder, polymer binder  
 and mold-release diluent for molding ceramic microstructures on a  
 substrate  
 IN Dillon, Kenneth R.; Moh, Kyung H.; Wood, Thomas Edward; Chiu,  
 Raymond C.; King, Vincent Wen-shiuan; Rusin, Richard P.; Hoopman,  
 Timothy Lee; Humpal, Paul Edward  
 PA 3M Innovative Properties Co., USA  
 SO U.S., 8 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	US 6352763	B1	20020305	US 1998-221007	199812 23

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WO 2000039831	A1	20000706	WO 1999-US6949	199903 31
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W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU,  
 CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
 IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,  
 MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,  
 SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AM, AZ, BY, KG, KZ,  
 MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR,  
 IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,  
 GW, ML, MR, NE, SN, TD, TG

JP 2002533900	T	20021008	JP 2000-591645	199903 31
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JP 3892668 B2 20070314  
US 20020102411 A1 20020801 US 2002-57599

200201  
24

US 6713526 B2 20040330  
JP 2007015391 A 20070125 JP 2006-223434

200608  
18

PRAI US 1998-221007 A 19981223 <--  
JP 2000-591645 A3 19990331 <--  
WO 1999-US6949 W 19990331 <--

AB Curable slurries, for forming ceramic microstructures on substrates using a mold, comprise a mixt. of a ceramic powder (such as titania, zirconia, silica, magnesia or alumina), a fugitive polymer binder (such as epoxy resins, polyacrylates and thermoplastic polymers), and a mold-release diluent (such as ethylene glycol, 1,3-butanediol or Bu stearate). The ceramic powder has a low softening temp. of .apprx.400-600° and a coeff. of thermal expansion closely matched to that of the substrate. The fugitive binder is capable of radiation curing, electron beam curing, or thermal curing. The mold-release diluent promotes release properties with the mold after curing the binder and/or quick and complete burnout of the binder during debinding.

IT 58109-40-3, Diphenyliodonium hexafluorophosphate  
(curing initiator system; curable slurries

contg. ceramic powder, polymer binder and mold-release diluent  
for molding ceramic microstructures on a substrate)

RN 58109-40-3 HCA

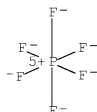
CN Iodonium, diphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 16919-18-9

CMF F6 P

CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I

Ph-I<sup>+</sup>Ph

IC ICM B32B018-00

INCL 428325000

CC 57-2 (Ceramics)

Section cross-reference(s): 38, 76

ST curable slurry polymer binder ceramic powder  
microstructure substrate molding

IT Silanes

(alkoxy, adhesion agent; curable slurries contg.  
ceramic powder, polymer binder and mold-release diluent for  
molding ceramic microstructures on a substrate)

IT Epoxy resins, processes

(binder; curable slurries contg. ceramic powder,  
polymer binder and mold-release diluent for molding ceramic  
microstructures on a substrate)

IT Powders

Slurries

(ceramic; curable slurries contg. ceramic powder,  
polymer binder and mold-release diluent for molding ceramic  
microstructures on a substrate)

IT Glass substrates

Molding

Plasma display panels

Polymerization catalysts

Sintering

Surfactants

Thermal expansion

(curable slurries contg. ceramic powder, polymer binder  
and mold-release diluent for molding ceramic microstructures on a  
substrate)

IT Ceramics

(greenware; curable slurries contg. ceramic powder,  
polymer binder and mold-release diluent for molding ceramic  
microstructures on a substrate)

IT Frits  
(in slurries; curable slurries contg. ceramic powder,  
polymer binder and mold-release diluent for molding ceramic  
microstructures on a substrate)

IT Adhesion, physical  
(interfacial; curable slurries contg. ceramic powder,  
polymer binder and mold-release diluent for molding ceramic  
microstructures on a substrate)

IT Glycols, uses  
Polyoxyalkylenes, uses  
(mold-release agent; curable slurries contg. ceramic  
powder, polymer binder and mold-release diluent for molding  
ceramic microstructures on a substrate)

IT Parting materials  
(mold-release agents; curable slurries contg. ceramic  
powder, polymer binder and mold-release diluent for molding  
ceramic microstructures on a substrate)

IT Thermal decomposition  
(of ceramic binder; curable slurries contg. ceramic  
powder, polymer binder and mold-release diluent for molding  
ceramic microstructures on a substrate)

IT Ceramics  
(powders; curable slurries contg. ceramic powder,  
polymer binder and mold-release diluent for molding ceramic  
microstructures on a substrate)

IT Ceramics  
(slurries; curable slurries contg. ceramic powder,  
polymer binder and mold-release diluent for molding ceramic  
microstructures on a substrate)

IT Plastics, processes  
(thermoplastics, binder; curable slurries contg.  
ceramic powder, polymer binder and mold-release diluent for  
molding ceramic microstructures on a substrate)

IT 109-16-0, Triethylene glycol dimethacrylate 1565-94-2, Bisphenol-a  
diglycidyl ether dimethacrylate 9003-01-4, Polyacrylic acid  
25085-99-8, DER 332  
(binder; curable slurries contg. ceramic powder,  
polymer binder and mold-release diluent for molding ceramic  
microstructures on a substrate)

IT 10373-78-1, Camphoroquinone 58109-40-3, Diphenyliodonium  
hexafluorophosphate 91528-47-1, Ethyl dimethylaminobenzoate  
(curing initiator system; curable slurries  
contg. ceramic powder, polymer binder and mold-release diluent  
for molding ceramic microstructures on a substrate)

IT 1303-86-2, Boron oxide (B2O3), processes 1304-28-5, Barium oxide  
(BaO), processes 1309-48-4, Magnesium oxide (MgO), processes  
1312-81-8, Lanthanum oxide (La2O3) 1314-13-2, Zinc oxide (ZnO),



processes 1314-56-3, Phosphorus oxide (P2O5), processes  
 1344-28-1, Alumina, processes 7631-86-9, Silica, processes  
 (in ceramic powder; curable slurries contg. ceramic  
 powder, polymer binder and mold-release diluent for molding  
 ceramic microstructures on a substrate)

IT 107-21-1, Ethylene glycol, uses 107-88-0, 1,3 Butanediol  
 123-95-5, Butyl stearate 131-17-9, Diallyl phthalate 25322-68-3,  
 Carbowax 200  
 (mold-release agent; curable slurries contg. ceramic  
 powder, polymer binder and mold-release diluent for molding  
 ceramic microstructures on a substrate)

IT 1314-23-4, Zirconia, processes 13463-67-7, Titanium oxide (TiO2),  
 processes  
 (particles; curable slurries contg. ceramic powder,  
 polymer binder and mold-release diluent for molding ceramic  
 microstructures on a substrate)

RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D L102 1-19 BIB ABS HITSTR HITIND

L102 ANSWER 1 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 138:145058 HCA Full-text

TI Radiation-sensitive curable polymer compositions  
 and pattern formation using them

IN Furukawa, Akira

PA Mitsubishi Paper Mills, Ltd., Japan

SO Jpn. Kokai Tokyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2003026744	A	20030129	JP 2001-220015	200107 19

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PRAI JP 2001-220015

20010719 <--

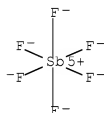
AB The comps. contain (A) polymers having styrenic double bonds at side  
 chains and (B) radical or acid generators by irradiation of radiation and  
 do not contain acrylate monomers and oligomers. The comps. may  
 contain (C) polymers having vinylpyridinium groups at side chains.  
 Patterns are formed by applying the comps. on substrates,

patternwise exposing, and developing with H<sub>2</sub>O or alk. aq. solns. The compns. are rapidly cured with high sensitivity without curing inhibition by O.

IT 52754-92-4, Diphenyliodonium hexafluoroantimonate  
(acid generators; radiation-curable polymer compns. for pattern formation without curing inhibition by oxygen)  
RN 52754-92-4 HCA  
CN Iodonium, diphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 17111-95-4  
CMF F6 Sb  
CCI CCS



CM 2

CRN 10182-84-0  
CMF C12 H10 I



IC ICM C08F299-00  
ICS C08F290-08; G03F007-027; G03F007-029; G03F007-031; G03F007-038  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76  
ST styrene polymer radiation curable pattern formation;  
vinylpyridinium polymer radiation curable oxygen inhibition prevention; printed circuit patterning styrene polymer photocrosslinking; radical generator photocrosslinking

- styrene polymer patterning; acid generator  
 photocrosslinking styrene polymer patterning
- IT Phenolic resins, preparation  
 (cresol-based, reaction products with chloromethylstyrene;  
 radiation-curable polymer compns. for pattern formation  
 without curing inhibition by oxygen)
- IT Quaternary ammonium compounds, uses  
 (polymers; radiation-curable polymer compns. for  
 pattern formation without curing inhibition by oxygen)
- IT Negative photoresists  
 Printed circuit boards  
 (radiation-curable polymer compns. for pattern  
 formation without curing inhibition by oxygen)
- IT 24979-70-2DP, Maruka Lyncur S 1P, reaction products with  
 chloromethylstyrene  
 (Maruka Lyncur S 1P; radiation-curable polymer compns.  
 for pattern formation without curing inhibition by  
 oxygen)
- IT 52754-92-4, Diphenyliodonium hexafluoroantimonate  
 85342-62-7, NAI 105  
 (acid generators; radiation-curable polymer compns. for  
 pattern formation without curing inhibition by oxygen)
- IT 9016-83-5DP, Formaldehyde-cresol copolymer, reaction products with  
 chloromethylstyrene 30030-25-2DP, reaction products with  
 hydroxystyrene polymers or phenolic resins 117675-58-8P  
 (radiation-curable polymer compns. for pattern  
 formation without curing inhibition by oxygen)
- IT 1520-21-4D, p-Aminostyrene, reaction products with  
 polycarboxystyrene 28391-39-1D, reaction products with  
 aminostyrene 277307-78-5 491869-26-2 491869-27-3 491869-28-4  
 (radiation-curable polymer compns. for pattern  
 formation without curing inhibition by oxygen)
- IT 6652-28-4, Vicure 30 25722-66-1, Triazine A 75980-60-8, Lucirin  
 TPO 120307-06-4, P 3B 359776-76-4, WS Triazine  
 (radical generators; radiation-curable  
 polymer compns. for pattern formation without  
 curing inhibition by oxygen)
- IT 1592-20-7, CMS 14 7727-33-5, 1,1,2,2-Tetrakis(4-  
 hydroxyphenyl)ethane  
 (reactants in prepn. of polymerizable monomers; radiation-  
 curable polymer compns. for pattern formation without  
 curing inhibition by oxygen)
- L102 ANSWER 2 OF 19 HCA COPYRIGHT 2008 ACS on STN
- AN 135:257589 HCA Full-text
- TI Polymerizable compositions containing  
 radical initiators with no acid release

IN Toba, Yasumasa; Uesugi, Takahiko  
PA Toyo Ink Mfg. Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 2001261727	A	20010926	JP 2000-77501	200003 21

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PRAI JP 2000-77501 20000321 <--  
OS MARPAT 135:257589  
AB The comps., useful for photoresists, coatings, etc., comprise  
polymn. initiators Z+Ar1NHCH2COO- (Ar1 = aryl; Z+ = cations selected  
from iodonium, iron arenium, sulfonium, phosphonium, ammonium) and  
radically polymerizable compds. Thus, a compn. comprising  
pentaerythritol triacrylate and diphenyliodonium phenylglycine salt  
was UV-irradiated to show good curability and no acidity.  
IT 362055-74-1P  
(polymerizable compns. contg. radical  
initiators with no acid release)  
RN 362055-74-1 HCA  
CN Iodonium, diphenyl-, salt with N-phenylglycine (1:1) (9CI) (CA  
INDEX NAME)

CM 1

CRN 58013-93-7  
CMF C8 H8 N O2

PhNH-CH2-CO2-

CM 2

CRN 10182-84-0  
CMF C12 H10 I

Ph-I<sup>+</sup>-Ph

IT 1483-72-3, Diphenyliodonium chloride  
 (polymerizable compns. contg. radical  
 initiators with no acid release)  
 RN 1483-72-3 HCA  
 CN Iodonium, diphenyl-, chloride (1:1) (CA INDEX NAME)

Ph-I<sup>+</sup>Ph

● Cl<sup>-</sup>

IC ICM C08F002-50  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 37  
 ST radical polymn initiator glycinate reduced  
 acidity; diphenyliodonium phenylglycinate initiator pentaerythritol  
 triacrylate polymer  
 IT Polyoxyalkylenes, preparation  
 (acrylic; polymerizable compns. contg. radical  
 initiators with no acid release)  
 IT Polymerization catalysts  
 (photopolymn.; polymerizable compns. contg.  
 radical initiators with no acid release)  
 IT 362055-74-1P 362055-75-2P 362055-76-3P 362055-77-4P  
 362055-79-6P 362055-80-9P 362055-81-0P 362055-82-1P  
 362055-83-2P 362055-84-3P 362055-86-5P 362055-88-7P  
 362055-89-8P 362055-90-1P 362055-91-2P  
 (polymerizable compns. contg. radical  
 initiators with no acid release)  
 IT 9003-77-4P, 2-Ethylhexyl acrylate homopolymer  
 25053-15-0P, Diallyl phthalate homopolymer 25067-05-4P,  
 Glycidyl methacrylate homopolymer 25101-18-2P,  
 Diethylene glycol dimethacrylate homopolymer  
 25719-51-1P, 2-Ethylhexyl methacrylate homopolymer  
 26022-14-0P, 2-Hydroxyethyl acrylate homopolymer  
 26426-04-0P, Trimethylolpropane trimethacrylate homopolymer  
 27775-58-2P, Pentaerythritol triacrylate homopolymer  
 27813-91-8P, 1,6-Hexanediol dimethacrylate homopolymer  
 28158-16-9P, Ethylene glycol diacrylate homopolymer  
 29323-03-3P, Triallyl trimellitate homopolymer

36446-02-3P, Trimethylolpropane triacrylate homopolymer  
 57592-66-2P, Pentaerythritol tetraacrylate homopolymer  
 57592-67-3P, 1,6-Hexanediol diacrylate homopolymer  
 67653-78-5P, Dipentaerythritol hexaacrylate homopolymer  
 94457-89-3P, Polypropylene glycol diacrylate homopolymer  
 108065-49-2P, Pentaerythritol diacrylate homopolymer

(polymerizable compns. contg. radical  
 initiators with no acid release)

IT 1483-72-3, Diphenyliodonium chloride 3353-89-7,  
 Triphenylsulfonium bromide 5667-47-0, Dimethylphenacylsulfonium  
 bromide 6048-29-9 6267-01-2 19525-59-8, Potassium  
 N-phenylglycinate 32760-80-8, (η6-Cumene)(η5-  
 cyclopentadienyl)iron(II) hexafluorophosphate 62051-09-6,  
 Bis(p-tert-butylphenyl)iodonium tetrafluoroborate 74227-35-3,  
 Bis[4-(diphenylsulfonio)phenyl] sulfide bis(hexafluorophosphate)  
 75482-18-7, Diphenyl(p-phenylthiophenyl)sulfonium  
 hexafluorophosphate 78697-24-2 116808-67-4, Diphenyl(p-  
 methoxyphenyl)sulfonium triflate 125740-42-3 134251-02-8,  
 Iron(1+), (η5-2,4-cyclopentadien-1-yl)(η6-phenyl)-,  
 hexafluorophosphate(1-) 153049-76-4 214340-30-4  
 (polymerizable compns. contg. radical  
 initiators with no acid release)

L102 ANSWER 3 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 135:243053 HCA Full-text

TI Polymerizable compositions containing light-sensitive  
 radical polymerization catalysts generating no  
 acids

IN Toba, Yasumasa; Uesugi, Takahiko

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	
PI	JP 2001253904	A	20010918	JP 2000-68056	

200003  
 13

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PRAI JP 2000-68056 20000313 <--

OS MARPAT 135:243053

AB The compns. contain polymn. catalysts Z+S-C(:S)NR1R2 (I; R1, R2 =  
 alkyl; Z+ = cation chosen from iodonium, iron arenium, and sulfonium)  
 and radical polymerizable compds. Thus, a compn. contg. 100 parts

pentaerythritol triacrylate and 3 parts I ( $Z^+ = \text{di-Ph iodonium}$ ;  $R_1, R_2 = \text{Et}$ ) was applied on an Al plate and irradiated with UV to give a tack-free acid-free cured film.

IT 117744-78-2F, preparation  
(polymerizable comps. contg. light-sensitive radical  
polymn. catalysts generating no acids)  
RN 117744-78-2 HCA  
CN Iodonium, diphenyl-, diethylcarbamodithioate (9CI) (CA INDEX NAME)

CM 1

CRN 10182-84-0  
CMF C12 H10 I

$\text{Ph}-\text{I}^+-\text{Ph}$

CM 2

CRN 392-74-5  
CMF C5 H10 N S2

$\text{Et}-\overset{\text{CS}_2^-}{\underset{|}{\text{N}}}-\text{Et}$

IT 1483-72-3, Diphenyliodonium chloride  
(polymerizable comps. contg. light-sensitive radical  
polymn. catalysts generating no acids)  
RN 1483-72-3 HCA  
CN Iodonium, diphenyl-, chloride (1:1) (CA INDEX NAME)

$\text{Ph}-\text{I}^+-\text{Ph}$

●  $\text{Cl}^-$

IC ICM C08F002-50

ICS C08F020-00

CC 37-3 (Plastics Manufacture and Processing)

ST radical polymn catalyst phenyliodonium ethyl  
thiocarbamate; pentaerythritol acrylate polymer tack free

IT Polymerization catalysts  
(photochem., radical; polymerizable comps.  
contg. light-sensitive radical polymn.  
catalysts generating no acids)

IT 117744-78-2P, preparation 117744-80-6P, preparation  
360554-23-0P, preparation 360554-24-1P, preparation  
360554-25-2P, preparation 360554-26-3P, preparation  
360554-27-4P, preparation 360554-28-5P, preparation  
360554-29-6P, preparation 360554-30-9P, preparation  
360554-31-0P, preparation 360554-32-1P 360554-33-2P  
360554-34-3P 360554-35-4P  
(polymerizable comps. contg. light-sensitive radical  
polymn. catalysts generating no acids)

IT 9003-77-4P, 2-Ethylhexyl acrylate homopolymer 25053-15-0P, Diallyl  
phthalate homopolymer 25067-05-4P, Glycidyl methacrylate  
homopolymer 25101-18-2P, Diethylene glycol dimethacrylate  
homopolymer 25719-51-1P, 2-Ethylhexyl methacrylate homopolymer  
26022-14-0P, 2-Hydroxyethyl acrylate homopolymer 26426-04-0P,  
Trimethylolpropane trimethacrylate homopolymer 27775-58-2P,  
Poly(pentaerythritol triacrylate) 27813-91-8P, 1,6-Hexanediol  
dimethacrylate homopolymer 28158-16-9P, Ethylene glycol diacrylate  
homopolymer 29323-03-3P, Triallyl trimellitate homopolymer  
36446-02-3P, Poly(trimethylolpropane triacrylate) 57592-66-2P,  
Pentaerythritol tetraacrylate homopolymer 57592-67-3P,  
1,6-Hexanediol diacrylate homopolymer 67653-78-5P,  
Dipentaerythritol hexaacrylate homopolymer 94457-89-3P,  
Polypropylene glycol diacrylate homopolymer 108065-49-2P,  
Pentaerythritol diacrylate homopolymer  
(polymerizable comps. contg. light-sensitive radical  
polymn. catalysts generating no acids)

IT 128-04-1, Sodium dimethyldithiocarbamate 148-18-5, Sodium  
diethyldithiocarbamate 1483-72-3, Diphenyliodonium  
chloride 3353-89-7, Triphenylsulfonium bromide 4092-82-4, Sodium  
Diisopropyldithiocarbamate 12176-31-7 19028-28-5,  
Bis(p-methylphenyl)iodonium chloride 26068-56-4 32760-80-8  
34881-63-5 55310-46-8, Sodium dibenzylidithiocarbamate  
62051-09-6, Bis(p-tert-butylphenyl)iodonium tetrafluoroborate  
74227-35-3 75482-18-7, Diphenyl(p-phenylthiophenyl)sulfonium  
hexafluorophosphate 80499-27-0 116808-67-4, Diphenyl(p-  
methoxyphenyl)sulfonium triflate 125740-42-3 145612-66-4  
153049-76-4 360554-36-5  
(polymerizable comps. contg. light-sensitive radical  
polymn. catalysts generating no acids)



L102 ANSWER 4 OF 19 HCA COPYRIGHT 2008 ACS on STN  
 AN 132:271667 HCA Full-text  
 TI ~~Composition~~ polymerizable by visible light useful for  
 photoresist and adhesive  
 IN Oe, Yasushi; Kume, Makoto; Demachi, Yasushi  
 PA Toppan Printing Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 2000109509	A	20000418	JP 1998-281336	199810 02

JP 3674336 B2 20050720  
 PRAI JP 1998-281336 19981002 <--  
 OS MARPAT 132:271667

AB The compn. comprises (A) a compd. having  $\geq 1$  radically polymerizable ethylenic unsatd. bond, (B) an arom. onium compd. generating Broensted acid, Lewis acid, or radical which activates cationic or radical polymn. by chem. ray irradiat., (C) a spectral sensitizing dye having mol. structure conjugated with dialkylamino group for the onium compd. sensitization, and (D) an ammonium borate R1R2R3R4B-.Y+ (R1-4 = alkyl, aryl, allyl, alkoxy, alkenyl, alkynyl, silyl, heterocycle, halo; Y+ = quaternary ammonium, pyridinium, or quinolinium cation, phosphonium, sulfonium, oxosulfonium, or iodonium cation, metal cation). The compn. shows high sensitivity at longer wavelength, rapid curing property, gives transparent hardened products, and is useful for manuf. of printed circuits, optical disk, and photo-curable adhesives.

IT 313-39-3, Diphenyliodonium tetrafluoroborate  
 (photosensitive compn. contg. ethylenic compd., arom. onium salt, spectral sensitizing dye, and ammonium borate)

RN 313-39-3 HCA  
 CN Iodonium, diphenyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 14874-70-5  
 CMF B F4  
 CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I



- IC ICM C08F002-50  
ICS G03F007-004; G03F007-027; G03F007-029; G03H001-02
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35
- ST photocurable compn arom onium salt; spectral sensitizing dye photoresist; ammonium borate photosensitive compn adhesive
- IT Adhesives  
(photosensitive compn. contg. ethylenic compd., arom. onium salt, spectral sensitizing dye, and ammonium borate for photocurable adhesive)
- IT 313-39-3, Diphenyliodonium tetrafluoroborate 1230-77-9  
3524-68-3 6597-47-3 20413-07-4, 2-Benzoyl-3-(p-dimethylaminophenyl)-2-propenenitrile 25584-83-2, Viscoat HPA 25776-32-3, 2-Ethylhexyl acrylate-methacrylic acid copolymer 27425-55-4 61358-25-6, Bis(p-tert-butylphenyl)iodonium hexafluorophosphate 63226-13-1, 3,3'-Carbonylbis(7-diethylaminocoumarin) 100629-45-6, Aronix M 1600 117522-01-7, Tetramethylammonium butyltriphenylborate 121239-75-6, 4-Octyloxyphenyl(phenyl)iodonium hexafluoroantimonate 141714-66-1 142632-15-3 161291-22-1, 2,5-Bis[(4-diethylaminophenyl)methylene]cyclopentanone  
(photosensitive compn. contg. ethylenic compd., arom. onium salt, spectral sensitizing dye, and ammonium borate)
- L102 ANSWER 5 OF 19 HCA COPYRIGHT 2008 ACS on STN
- AN 131:170783 HCA Full-text
- TI Vinyl polymers, their aqueous emulsions and curable

compositions for use in pressure-sensitive adhesives  
 IN Nakagawa, Yoshiki; Fujita, Masayuki; Kitano, Kenichi  
 PA Kaneka Corporation, Japan  
 SO PCT Int. Appl., 59 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	WO 9943719	A1	19990902	WO 1999-JP979	199903 01
				<--	
	W: CA, CN, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 2000072815	A	20000307	JP 1999-26176	199902 03
				<--	
	JP 2000072816	A	20000307	JP 1999-49467	199902 26
				<--	
	CA 2321784	A1	19990902	CA 1999-2321784	199903 01
				<--	
	EP 1059308	A1	20001213	EP 1999-906542	199903 01
				<--	
	EP 1059308 R: BE, DE, FR, GB, IT, NL	B1	20061011		
	CN 1535988	A	20041013	CN 2004-10032432	199903 01
				<--	
	JP 2000095826	A	20000404	JP 1999-163608	199906 10
				<--	
	JP 2000136211	A	20000516	JP 1999-163607	199906 10

US 6964999

B1

20051115

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US 2000-622931200011  
13

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PRAI	JP 1998-47304	A	19980227	<--
	JP 1998-172958	A	19980619	<--
	JP 1998-207324	A	19980723	<--
	JP 1998-242101	A	19980827	<--
	JP 1998-242102	A	19980827	<--
	JP 1998-292673	A	19981015	<--
	WO 1999-JP979	W	19990301	<--

AB The polymers have  $\geq 1$  group of  $-\text{OC}(\text{O})\text{C}(\text{R})=\text{CH}_2$  ( $\text{R} = \text{H}$ ,  $\text{C}_1\text{-20}$  hydrocarbyl) at least on the mol. end, which can be cured by radiation or heat to products with good weather resistance, and are manufd., e.g., by the atom. transfer radical polymn. for improving the degree of terminal group introduction while having narrow mol. distribution. Thus, polymg. Bu acrylate in the presence of  $\text{CuBr}$ , pentamethyldiethylenetriamine and di-Et 2,5-dibromoadipate gave a Br-terminated polymer ( $\text{Mn } 10,900$ ,  $\text{Mw/Mn } 1.12$ ), 20 g of which was dissolved in  $\text{AcNMe}_2$ , combined with 1.46 g K methacrylate and mixed at room temp. for 2 days to give a methacryloyl-terminated polymer (I). A mixt. of 2.0 g I, 0.0252 g benzophenone, 0.079 mL diethanolmethylamine and 35.0 mg diphenyliodonium chloride, when coated on a glass surface and irradiated with UV light, gave a resilient cured product.

IT 10182-84-0, Diphenyliodonium  
(photoinitiator; radiation- and thermally curable vinyl  
polymers, aq. emulsions and compns. for use in pressure-sensitive  
adhesives)

RN 10182-84-0 HCA

CN Iodonium, diphenyl- (CA INDEX NAME)

 $\text{Ph-I}^+\text{Ph}$ 

IC ICM C08F008-14  
ICS C08F012-08; C08F020-10; C08F290-04; C08L025-06; C08L031-02;  
C08F002-48; C09D125-06; C09D131-02; C09J125-06; C09J131-02

CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 38, 42

ST living radical polymn vinyl monomer methacryloyl  
terminated polymer; pressure sensitive adhesive methacryloyl  
terminated polymer; emulsion methacryloyl terminated polymer  
pressure sensitive adhesive; thermal curable methacryloyl

- terminated polymer; radiation curable methacryloyl
- terminated polymer; atom transfer radical polymn
- terminated polymer
- IT Chain transfer agents
  - (functional; for manuf. of radiation- and thermally curable vinyl polymers)
- IT Polymerization
  - (living, radical; radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in pressure-sensitive adhesives)
- IT Polymerization
  - Polymerization catalysts
    - (living; radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in pressure-sensitive adhesives)
- IT Transition metal complexes
  - (polymn. catalysts; radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in pressure-sensitive adhesives)
- IT Adhesives
  - (pressure-sensitive; radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in pressure-sensitive adhesives)
- IT Adhesive films
  - (radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in pressure-sensitive adhesives)
- IT 3030-47-5, Pentamethyldiethylenetriamine 7787-70-4, Copper bromide (CuBr)
  - (complex polymn. catalysts; radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in pressure-sensitive adhesives)
- IT 869-10-3, Diethyl 2,5-dibromoadipate
  - (initiator; radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in pressure-sensitive adhesives)
- IT 119-61-9, Benzophenone, uses 6175-45-7, Diethoxyacetophenone 10182-84-0, Diphenyliodonium
  - (photoinitiator; radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in pressure-sensitive adhesives)
- IT 9003-49-0DP, Butyl acrylate polymer, methacryloyl- or acryloyl-terminated
  - (radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in pressure-sensitive adhesives)
- IT 6900-35-2, Potassium methacrylate 10192-85-5, Potassium acrylate
  - (terminating agents; radiation- and thermally curable vinyl polymers, aq. emulsions and compns. for use in

pressure-sensitive adhesives)  
 IT 6731-36-8, Perhexa 3M  
 (thermal-curing catalysts; radiation- and thermally  
 curable vinyl polymers, aq. emulsions and compns. for use  
 in pressure-sensitive adhesives)  
 RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 6 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 130:353741 HCA Full-text

TI Photocurable paint composition for road markings

IN Nakamura, Kenichi; Kamata, Hirotooshi; Koshikawa, Toshio; Sugita,  
 Suichi

PA Showa Denko Kabushiki Kaisha, Japan

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
EP 915136	A1	19990512	EP 1998-120941	199811 04
<--				
EP 915136	B1	20040121		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11236517	A	19990831	JP 1998-297258	199810 19
<--				
CA 2253054	A1	19990505	CA 1998-2253054	199811 04
<--				
US 6211260	B1	20010403	US 1998-185583	199811 04
<--				
AT 258210	T	20040215	AT 1998-120941	199811 04
<--				
TW 506997	B	20021021	TW 1998-87118442	199811

HK 1018793

A1

20050121

HK 1999-103578

199908

17

PRAI JP 1997-303081

A

19971105

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US 1998-86141P

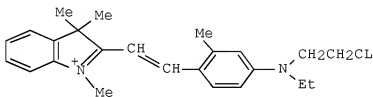
P

19980520

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OS MARPAT 130:353741

GI



AB A photocurable paint compn. for road markings is disclosed, comprising (A) a compd. having an ethylenically unsatd. group, (B) a filler, (C) a cationic dye represented by formula (1): D+A- (wherein D+ represents a cation having an absorption max. wavelength in the wavelength region of from 400 to 1,200 nm, and A- represents an optional anion), (D) a quaternary org. borate-type sensitizer represented by formula (2): R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>R<sub>4</sub>B-Z<sup>+</sup> (wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> each independently represents an alkyl group, an aryl group, an aralkyl group, an alkenyl group, an alkynyl group, a silyl group, a heterocyclic group or a halogen atom, and Z<sup>+</sup> represents an optional cation), (E) an UV radical polymn. initiator capable of generating a radical upon absorption of light at a wavelength of 400 nm or less, and, optionally, (F) glass beads. This compn. provides thick coatings that are photocurable in a short time and have good abrasion resistance. A typical compn. contained 5:2:1:2 Ripoxy SP-1529 (bisphenol A epoxy resin acrylate)-tripropylene glycol diacrylate-EB754 (70:30 linear acrylic oligomer-1,6-hexanediol diacrylate mixt.)-isobornyl acrylate mixt. 100, Taipaque CR-58 (rutile) 30, Escalon 100 (CaCO<sub>3</sub>) 100, GB-402T (glass beads) 100, Aerosil 200 3, 0.7:10.0:30:10:49.3 cationic dye I-tetrabutylammonium butyltri(4-tert-butylphenyl)borate-Irgacure 184 (1-hydroxycyclohexyl Ph ketone)-Lucirin TPO (2,4,6-trimethylbenzoyldiphenylphosphine oxide)-N-methyl-2-pyrrolidone soln. 7 parts.

IT 66003-76-7, Diphenyliodonium triflate

(photopolymn. accelerator; photocurable paint compn.  
for road markings)

RN 66003-76-7 HCA  
CN Iodonium, diphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA  
INDEX NAME)

CM 1

CRN 37181-39-8  
CMF C F3 O3 S



CM 2

CRN 10182-84-0  
CMF C12 H10 I



IC ICM C09D005-00  
ICS C08F002-50  
CC 42-10 (Coatings, Inks, and Related Products)  
ST photocurable road marking cationic dye borate sensitizer;  
methylbenzoyldiphenylphosphine oxide photoinitiator road marking;  
hydroxycyclohexyl phenyl ketone photoinitiator road marking; indole  
styryl dye photocurable road marking; glass bead  
photocurable road marking; calcium carbonate filler  
photocurable road marking; rutile filler  
photocurable road marking; hexanediol diacrylate  
photocurable road marking; tripropylene glycol diacrylate  
photocurable road marking; bisphenol A epoxy acrylate  
photocurable road marking; cure rate enhanced road  
marking  
IT Glass beads  
(GB-402T, filler; photocurable paint compn. for road  
markings)



IT Epoxy resins, uses  
Polyurethanes, uses  
(acrylic, cured paint; photocurable paint  
compn. for road markings)

IT Dyes  
(cationic, photocurability-enhancing dye;  
photocurable paint compn. for road markings)

IT Onium compounds  
(iodonium, diaryl, photopolymn. accelerator; photocurable  
paint compn. for road markings)

IT Crosslinking catalysts  
(photochem.; photocurable paint compn. for road  
markings)

IT Cyanine dyes  
(photocurability-enhancing dye; photocurable  
paint compn. for road markings)

IT Marking  
Roads  
(photocurable paint compn. for road markings)

IT Coating materials  
(photocurable; photocurable paint compn. for  
road markings)

IT Borates  
(photosensitizer; photocurable paint compn. for road  
markings)

IT Sulfonium compounds  
(triaryl, photopolymn. accelerator; photocurable paint  
compn. for road markings)

IT Dyes  
(xanthene, photocurability-enhancing dye;  
photocurable paint compn. for road markings)

IT 125004-26-4, Tipaque A 220  
(anatase form, filler; photocurable paint compn. for  
road markings)

IT 13048-33-4DP, 1,6-Hexanediol diacrylate, epoxy acrylate polymers  
224628-00-6P 224785-37-9P 224785-38-0P 224785-39-1P  
224785-40-4P 224785-41-5P  
(cured paint; photocurable paint compn. for  
road markings)

IT 471-34-1, Eskalon 100, uses  
(filler; photocurable paint compn. for road markings)

IT 3648-36-0 6441-82-3 115449-80-4 141714-54-7 193146-98-4  
(photocurability-enhancing dye; photocurable  
paint compn. for road markings)

IT 66003-76-7, Diphenyliodonium triflate 66003-78-9,  
Triphenylsulfonium triflate  
(photopolymn. accelerator; photocurable paint compn.)

for road markings)

IT 947-19-3, Irgacure 184 7473-98-5, Darocur 1173 24650-42-8,  
Irgacure 651 75980-60-8, Lucirin TPO 184649-96-5, Irgacure 1800  
(photopolymn. initiator; photocurable paint compn. for  
road markings)

IT 120307-06-4, Tetrabutylammonium butyltriphenylborate 189947-86-2,  
Tetrabutylammonium butyltris(4-tert-butylphenyl)borate 219125-19-6  
(photosensitizer; photocurable paint compn. for road  
markings)

IT 13463-67-7, Tipaque CR 58, uses  
(rutile form, filler; photocurable paint compn. for  
road markings)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 7 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 129:96671 HCA Full-text

TI Radiation-curable coating compositions for  
optical fibers

IN Toba, Yasumasa

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 10158039	A	19980616	JP 1996-313298	199611 25

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PRAI JP 1996-313298 19961125 <--

OS MARPAT 129:96671

AB The comps. comprise (A) onium borate complexes as polymn. initiators  
consisting of onium cations and borate anions (BYmZn)- (Y = F, Cl; Z  
= Ph substituted by  $\geq 2$  electron attractive groups selected from F,  
cyano, NO<sub>2</sub>, and CF<sub>3</sub>; m = 0-3; n = 1-4; m + n = 4) and (B) acid-  
curable compds. Optical fibers coated with the comps. are also  
claimed. Thus, a 1-mm quartz rod was coated with a compn. comprising  
diphenyl(9-anthrylmethyl)sulfonium tetrakis(pentafluorophenyl)borate  
3, radically polymerizable compd. Aronix M 1100 40, urethane acrylate  
UA 306H 20, and tetrahydrofurfuryl acrylate 10 parts and irradiated  
with UV to give an optical fiber showing no strain.

IT 153686-14-5

(polymn. initiator; radiation-curable coatings for

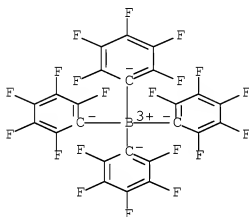
optical fibers)  
RN 153606-14-5 HCA  
CN Iodonium, diphenyl-, tetrakis(2,3,4,5,6-pentafluorophenyl)borate(1-)  
(1:1) (CA INDEX NAME)

CM 1

CRN 47855-94-7

CMF C24 B F20

CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I

Ph-I<sup>+</sup>-Ph

IC ICM C03C025-02  
ICS C09D007-00; G02B006-44  
CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 73  
ST UV curable coating sulfonium borate initiator; optical  
fiber coating sulfonium borate catalyst  
IT Coating materials  
(UV-curable; radiation-curable coatings for  
optical fibers)

IT Polymerization catalysts  
 (photopolymn., onium borate complexes; radiation-curable  
 coatings for optical fibers)

IT Optical fibers  
 (radiation-curable coatings for optical fibers)

IT Epoxy resins, uses  
 (radiation-curable coatings for optical fibers)

IT Coating materials  
 (radiation-curable; radiation-curable  
 coatings for optical fibers)

IT 153606-14-5 193957-53-8, Dimethylphenacylsulfonium  
 tetrakis(pentafluorophenyl)borate 208932-32-5  
 (polymn. initiator; radiation-curable coatings for  
 optical fibers)

IT 146320-67-4P  
 (radiation-curable coatings for optical fibers)

IT 209789-97-9P 209789-98-0P  
 (radiation-curable coatings for optical fibers)

IT 25085-98-7, ERL 4221  
 (radiation-curable coatings for optical fibers)

L102 ANSWER 8 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 128:76169 HCA Full-text

TI Radically polymerizable compositions  
 and their cured products

IN Toba, Yasumasa

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 35 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 09316117	A	19971209	JP 1996-139823	

199606  
 03

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PRAI JP 1996-139823 19960603 <--

OS MARPAT 128:76169

AB The comps. contain (a) polymn. initiators of onium borate complexes  
 made of onium cations and (BYmZn)- (Y = F, Cl; Z = Ph substituted by  
 ≥2 groups selected from F, CN, NO2, and CF3; m = 0-3; n = 1-4; m + n  
 = 4) and (b) radically polymerizable compds. The polymn. initiators  
 have good soly. in org. materials and resins and generate acids  
 (byproducts) in compds. during polymn., which are removed by heating.

The cured products of the compns. are useful for molding resins, casting resins, sealants, and resists, etc. Thus, a compn. prepd. from 3 parts dimethylphenacylsulfonium tetrakis(pentafluorophenyl)borate (polymn. initiators) and 100 parts pentaerythritol triacrylate was applied on an Al plate and UV-irradiated to give a cured membrane without tackiness, which was heated at 150° to give an acid-free compn.

IT 153606-14-5, Diphenyliodonium tetrakis(pentafluorophenyl)borate

(polymn. initiators; radical polymerizable compns. contg. generated acid-removable polymn. initiators)

RN 153606-14-5 HCA

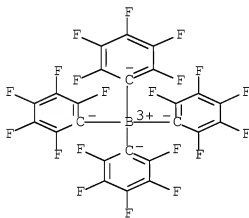
CN Iodonium, diphenyl-, tetrakis(2,3,4,5,6-pentafluorophenyl)borate(1-)  
(1:1) (CA INDEX NAME)

CM 1

CRN 47855-94-7

CMF C24 B F20

CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I

Ph-I<sup>+</sup>-Ph

IC ICM C08F004-52  
ICS C08F002-46; C08F020-28

CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 42

ST radical polymn cured product byproduct  
free; sulfonium borate initiator erythritol acrylate photopolymn

IT Coating materials  
(UV-curable; radical polymerizable  
compns. contg. generated acid-removable polymn. initiators for)

IT Borates  
(complexes, polymn. initiators; radical  
polymerizable compns. contg. generated acid-removable  
polymn. initiators)

IT Polymerization catalysts  
(radical; radical polymerizable  
compns. contg. generated acid-removable polymn. initiators)

IT 153606-14-5, Diphenyliodonium tetrakis(pentafluorophenyl)borate 153760-74-8 181120-29-6 193957-53-8 193957-56-1  
193957-57-2 193957-58-3 193957-59-4 194293-43-1 194352-69-7  
194352-70-0 194352-77-7 194470-21-8 194470-23-0 194470-24-1  
194473-11-5 194473-66-0 194474-32-3 194479-54-4 194479-56-6  
194479-70-4 194479-97-5 195517-23-8 195620-34-9 197174-96-2,  
N-Benzylthiazolium tetrakis(pentafluorophenyl)borate 197174-99-5,  
N-(p-Cyanobenzyl)thiazolium tetrakis(pentafluorophenyl)borate  
197175-94-3, 2-Mercapto-3-phenacylthiazolium  
tetrakis(pentafluorophenyl)borate 198641-10-0 198641-11-1  
198641-12-2 198641-13-3 198641-15-5 198641-16-6 198641-18-8  
198641-20-2 198641-22-4 198641-23-5 198641-24-6 198641-28-0  
198641-29-1 198641-31-5 198641-33-7 198641-35-9 198641-37-1  
198641-39-3 198641-40-6 198641-41-7 200573-03-1 200573-19-9  
200573-20-2 200573-22-4 200573-23-5 200573-24-6 200573-26-8  
200573-27-9  
(polymn. initiators; radical  
polymerizable compns. contg. generated acid-removable  
polymn. initiators)

IT 9003-77-4P, 2-Ethylhexyl acrylate homopolymer  
25053-15-0P, Diallyl phthalate homopolymer 25067-05-4P,  
Glycidyl methacrylate homopolymer 25101-18-2P,  
Diethylene glycol dimethacrylate homopolymer  
25719-51-1P, 2-Ethylhexyl methacrylate homopolymer  
26022-14-0P, 2-Hydroxyethyl acrylate polymer  
26426-04-0P, Trimethylolpropane trimethacrylate homopolymer  
27775-58-2P, Pentaerythritol triacrylate homopolymer  
27813-91-8P, 1,6-Hexanediol dimethacrylate homopolymer  
28158-16-9P, Ethylene glycol diacrylate homopolymer

29323-03-3P 36446-02-3P, Trimethylolpropane triacrylate  
 homopolymer 57592-66-2P, Pentaerythritol tetraacrylate  
 homopolymer 57592-67-3P, 1,6-Hexanediol diacrylate  
 homopolymer 67653-78-5P, Dipentaerythritol hexaacrylate  
 homopolymer 94457-89-3P, Polypropylene glycol diacrylate  
 homopolymer 108065-49-2P

(radical polymerizable compns. contg.

generated acid-removable polymn. initiators)

IT 65-61-2, Acridine orange 90-93-7, 4,4'-Diethylaminobenzophenone  
 120-12-7, Anthracene, uses 448-61-3, 2,4,6-Triphenylpyrylium  
 tetrafluoroborate 492-22-8, Thioxanthone 917-23-7,  
 Tetraphenylporphyrin 1582-78-1 6285-94-5 11121-48-5, Rose  
 Bengal 17372-87-1, Eosin Y 25470-94-4 38215-36-0,  
 3-(2-Benzothiazolyl)-7-(diethylamino)coumarin 63226-13-1,  
 3,3'-Carbonyl bis[7-(diethylamino)coumarin] 200573-28-0  
 (sensitizers; radical polymerizable compns.  
 contg. generated acid-removable polymn. initiators)

L102 ANSWER 9 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 127:58135 HCA Full-text

TI Holographic recording photosensitive composition,  
 holographic recording medium and volume-phase-type hologram  
 formation

IN Ito, Hiromitsu; Oe, Yasushi

PA Toppan Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 09106242	A	19970422	JP 1995-292247	199510 12

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PRAI JP 1995-292247 19951012 <--

OS MARPAT 127:58135

AB The title compn. consists mainly of solvent-sol., cationic  
 polymerizable heat-curable epoxy oligomers, radical polymerizable  
 ethylenic aliph. monomers with b.p.  $\geq 100^\circ$ , arom. onium salt photoacid  
 generators, cationic dye sensitizers and boric acid ammonium salt  
 R1R2R3R4B-.R5R6R7R8N+ (R1-4 = alkyl, aryl, alkoxy, aryl, alkenyl,  
 aliph., heterocyclyl; R5-8 = alkyl, aryl, alkoxy, aryl, alkenyl,  
 aliph., heterocyclyl, H). The compn. shows high visible-light

sensitivity, excellent storage stability, and good holog.  
characteristics.

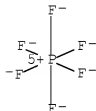
IT 58109-40-3, Diphenyliodoniumhexafluorophosphate  
66003-76-7, Diphenyliodonium trifluoromethanesulfonate  
(holog. recording photosensitive compn.)  
RN 58109-40-3 HCA  
CN Iodonium, diphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 16919-18-9

CMF F6 P

CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I



RN 66003-76-7 HCA  
CN Iodonium, diphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA  
INDEX NAME)

CM 1

CRN 37181-39-8

CMF C F3 O3 S





CM 2

CRN 10182-84-0

CMF C12 H10 I



IC ICM G03H001-02  
ICS G03F007-004; G03F007-027; G03F007-029; G03F007-032

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 109-16-0, Triethyleneglycol dimethacrylate 1680-21-3,  
Triethyleneglycol diacrylate 2223-82-7, Neopentylglycol diacrylate  
2602-18-8 2642-25-3 4074-88-8, Diethyleneglycol diacrylate  
6307-03-5 7328-17-8, Ethylcarbitol acrylate 13048-33-4,  
1,6-Hexanediol diacrylate 14331-21-6 14426-28-9,  
Bis(p-dimethylaminophenyl)phenylmethylium 15185-43-0 15625-89-5,  
Trimethylolpropane triacrylate 16423-68-0, Erythrosine  
25068-38-6, Epikote 1007 39527-61-2, ST 5100 42978-66-5,  
Tripropyleneglycol diacrylate 58109-40-3,  
Diphenyliodoniumhexafluorophosphate 61358-25-6,  
Bis(p-tert-butylphenyl)iodonium hexafluorophosphate 63411-61-0,  
EBPS 300 66003-76-7, Diphenyliodonium  
trifluoromethanesulfonate 66230-26-0 70903-88-7, EOCN 104  
81775-74-8, EPPN 201 93195-67-6, BREN S 113441-20-6, Sun Tohto  
ST 5080 117522-01-7, Tetramethylammonium n-butyltriphenylborate  
121458-82-0, Tetraethylammonium n-butyltriphenylborate  
141714-66-1, Tetramethylammonium n-octyltriphenylborate  
142632-15-3, Tetramethylammonium n-butyltrianisylborate  
189084-10-4 189084-16-0 191043-89-7 191043-91-1 191043-93-3  
191043-94-4 191043-95-5 191043-96-6, Tetramethylammonium  
n-octyltrianisylborate  
(holog. recording photosensitive compn.)

AN 123:259987 HCA Full-text  
 TI Coatable compositions using new initiator for coated  
 abrasives, bonded abrasives, and nonwoven abrasives  
 IN Klun, Thomas P.; Hibbard, Louis D.; Sprugeon, Kathryn M.; Culler,  
 Scott R.  
 PA Minnesota Mining and Manufacturing Co., USA  
 SO Eur. Pat. Appl., 58 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 654323	A1	19950524	EP 1994-118308	199411 21
				<--	
	EP 654323	B1	20050420		
	R: DE, ES, FR, GB, IT				
	CA 2134156	A1	19950523	CA 1994-2134156	199410 24
				<--	
	JP 07247477	A	19950926	JP 1994-286527	199411 21
				<--	
	US 5667541	A	19970916	US 1996-753208	199611 21

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PRAI US 1993-156803 A 19931122 <--  
 US 1995-444966 B1 19950519 <--  
 US 1996-597683 B1 19960206 <--

AB The title coating compns. have a combination of a free radically  
 polymerizable compn., abrasive particles, and a photoinitiator system  
 characterized by a compd. which cleaves via  $\alpha$ -cleavage and has a  
 molar absorptivity in dil. MeOH soln. .apprx.4-400 L/mol-cm in at  
 least some portion of the UV/visible spectrum .apprx.395-500 nm. An  
 abrasive article was prepd. by prepg. a slurry of Al2O3 and Irgacure  
 369 1 phr in trimethylpropane triacrylate-  
 tris(hydroxyethyl)isocyanurate triacrylate and extruding onto a  
 nickel prodn. tool with pyramid pattern and pressing a PET film  
 against the tool and exposing to UV light to cure the abrasive  
 article.

IT 58109-40-3, Diphenyliodonium hexafluorophosphate

(photoinitiator contg.; in coatable compns. using new initiator  
for coated abrasives, bonded abrasives, and nonwoven abrasives)

RN 58109-40-3 HCA

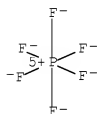
CN Iodonium, diphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 16919-18-9

CMF F6 P

CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I



IC ICM B24D003-34

ICS C08F002-50; B24D011-00

CC 42-10 (Coatings, Inks, and Related Products)

ST Irgacure photoinitiator abrasive article; polyacrylate  
curable binder abrasive article; alumina photoinitiator  
curable binder abrasive article; photoinitiator alpha  
cleavage abrasive article

IT 6542-67-2 7473-98-5, Darocur 4265 10287-53-3, Ethyl

p-(dimethylamino)benzoate 10373-78-1, Camphorquinone

58109-40-3, Diphenyliodonium hexafluorophosphate

71868-10-5, Irgacure 907 75081-21-9, Isopropylthioxanthone

119313-12-1, Irgacure 369

(photoinitiator contg.; in coatable compns. using new initiator  
for coated abrasives, bonded abrasives, and nonwoven abrasives)

L102 ANSWER 11 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 123:56860 HCA Full-text

TI Photooxidizable initiator composition and photosensitive materials containing it

IN Neckers, Douglas C.; Shi, Jianmin

PA Spectra Group Limited, Inc., USA

SO U.S., 11 pp.  
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	US 5395862	A	19950307	US 1992-988189	199212 09

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PRAI US 1992-988189 19921209 <--

OS MARPAT 123:56860

AB Disclosed is a photooxidizable initiator compn. comprising a fluorone initiator and a coinitiator which is capable of accepting an electron from the fluorone upon excitation of the fluorone by actinic radiation, wherein the compn. produces free radicals which initiate free radical reactions; and photohardenable compns. which comprise a free radical polymerizable compd., a fluorone initiator and a coinitiator capable of accepting an electron from the fluorone upon exposure of the compn. to actinic radiation, and producing free radicals which initiate free radical polymn. The photooxidizable initiators bleach as they absorb light and provide high depth of cure, and are useful in photosensitive materials and in two and three dimensional imaging. A typical photopolymerizable compn. contained 2,4,5,7-tetraiodo-3-hydroxy-6-fluorone and diphenyliodonium chloride initiators and acrylate monomers.

IT 1483-72-3, Diphenyliodonium chloride  
(photooxidizable initiator compn. and photosensitive materials contg. it)

RN 1483-72-3 HCA

CN Iodonium, diphenyl-, chloride (1:1) (CA INDEX NAME)

Ph-I<sup>+</sup>Ph

● Cl-

IC ICM C08F002-46  
 INCL 522025000  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 67  
 IT 1483-72-3, Diphenyliodonium chloride  
 (photooxidizable initiator compn. and photosensitive materials  
 contg. it)

L102 ANSWER 12 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 119:29351 HCA Full-text

TI Photocurable compositions containing aromatic  
 iodonium salts

IN Inaishi, Koji

PA Brother Ind Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

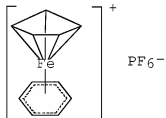
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	
PI	JP 04363309	A	19921216	JP 1991-139056	199106 11
				<--	
PRAI	JP 1991-139056		19910611	<--	
OS	MARPAT 119:29351				
GI					



I

AB The title compns., which are curable by low energy visible light and useful for photoresists and image-recording materials comprise compds. having radically polymerizable unsatd. groups, metal arenes, org. pigments, and arom. iodonium salts. Thus, a 3:4 mixt. of polyethylene glycol diacrylate and pentaerythritol hexaacrylate 10, metal arene I 1.5, Methylene Blue 0.5, and diphenyliodonium bromide 0.5 g were blended, ultrasonically dispersed, kneaded at 100°, spread on a polyester film, then laminated with another polyester film to give a sample specimen, which when irradiated with 670 nm light cured with 1460.06 erg/cm<sup>2</sup> energy.

IT 1483-73-4, Diphenyliodonium bromide  
(polyacrylate photocurable compns. contg., with metallocenes and org. pigments, with high sensitivity to visible light)

RN 1483-73-4 HCA

CN Iodonium, diphenyl-, bromide (1:1) (CA INDEX NAME)



IC ICM C08F020-18  
ICS C08F002-50; C08F020-20; C08F026-10; C08F299-02; C09D004-02

CC 37-6 (Plastics Manufacture and Processing)

ST photocurable compn arom iodonium salt; pigment  
photocurable compn metallocene initiator; polyacrylate  
photocurable compn iodonium salt

IT Pigments  
(polyacrylate photocurable compns. contg., with metallocenes and arom. iodonium salts, with high sensitivity to visible light)

IT 126095-71-4  
(photocurable compns., contg. metallocenes and org. pigments and arom. iodonium salts, with high sensitivity to visible light)

IT 61-73-4, Methylene Blue  
(polyacrylate photocurable compns. contg., with metallocenes and arom. iodonium salts, with high sensitivity to visible light)

IT 1483-73-4, Diphenyliodonium bromide  
(polyacrylate photocurable compns. contg., with metallocenes and org. pigments, with high sensitivity to visible

light)  
IT 12176-31-7  
(polyacrylate photocurable compns. contg., with org.  
pigments and arom. iodonium salts, with high sensitivity to  
visible light)

L102 ANSWER 13 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 110:222622 HCA Full-text

OREF 110:36783a,36786a

TI Highly light-sensitive polymer compositions for  
photoresists

IN Nagasaka, Hideki; Ota, Katsuko

PA Mitsubishi Kasei Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
	-----				
PI	JP 63213503	A	19880906	JP 1987-44973	

198702

27

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JP 07103164 B 19951108  
PRAI JP 1987-44973 19870227 <--

GI For diagram(s), see printed CA Issue.

AB The compns. comprise unsatd. compds., sensitizers I [A = benzene or naphthalene ring; B = (heterocyclic) arom. ring; X and/or Y = NR<sub>1</sub>R<sub>2</sub>; R<sub>1</sub>, R<sub>2</sub> alkyl; l, m, n = 0, 1], and radical initiators. Thus, mixing Me methacrylate-methacrylic acid copolymer 10, trimethylolpropane triacrylate 10, methoxyphenol 0.060, Victoria Pure Blue BOH 0.060, and MEK 180 g prepd. a mixt. which was mixed with 2.5 phr 6-diethylaminobenzofuran-2-yl 4'-dimethylaminophenyl ketone, and 5 phr PH2I+.PF6-, spread on an Al plate, dried, coated with a 3- $\mu$ m poly(vinyl alc.) layer on top, covered with a mask, and irradiated with UV light at 1-mm distance for 6 s to give a cured product with sensitiveness ranking 10 (10 is best, 0 is worse), vs. 0 without the ketone sensitizer.

IT 58109-40-3

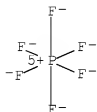
(radical initiators, for acrylic compns. contg. benzofuranyl Ph ketone photosensitizers)

RN 58109-40-3 HCA

CN Iodonium, diphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 16919-18-9  
CMF F6 P  
CCI CCS



CM 2

CRN 10182-84-0  
CMF C12 H10 I



IC ICM C08F002-48  
ICS G03C001-68  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 37, 42  
ST light sensitive resin radical initiator;  
photoresist sensitizer benzofuranyl phenyl ketone  
IT 149-30-4, 2(3H)-Benzothiazolethione 1707-68-2 6542-67-2  
17292-56-7 33943-20-3 58109-40-3  
(radical initiators, for acrylic compns. contg. benzofuranyl Ph  
ketone photosensitizers)

L102 ANSWER 14 OF 19 HCA COPYRIGHT 2008 ACS on STN  
AN 110:115927 HCA [Full-text](#)  
OREF 110:19129a,19132a  
TI Addition-polymerizable composition containing a ternary  
photoinitiator system and its polymerization  
IN Palazzotto, Michael C.; Ubel, Andrew F., III; Oxman, Joel D.; Ali,  
Zaki M.  
PA Minnesota Mining and Manufacturing Co., USA



SO Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 290133	A2	19881109	EP 1988-302778	198803 29
				<--	
	EP 290133	A3	19900502		
	EP 290133	B1	19981028		
	R: CH, DE, FR, GB, IT, LI, SE				
	CA 1323949	C	19931102	CA 1988-562679	198803 28
				<--	
	BR 8801531	A	19881108	BR 1988-1531	198803 30
				<--	
	JP 63273602	A	19881110	JP 1988-81169	198804 01
				<--	
	JP 2744789	B2	19980428		
	US 5545676	A	19960813	US 1994-365494	199412 28
				<--	
	US 6017660	A	20000125	US 1998-94184	199806 09
				<--	
PRAI	US 1987-34065	A	19870402	<--	
	US 1992-840880	B1	19920225	<--	
	US 1994-365494	A1	19941228	<--	
	US 1996-695566	B1	19960812	<--	
OS	MARPAT 110:115927				
AB	The title compns., with good cure speed, cure depth, and shelf life, comprise radically polymerizable monomers and a photoinitiator system contg. arylidonium salts, photosensitizers [absorbing in the range 300-1000 nm and sensitizing 2-methyl-4,6-bis(trichloromethyl)-s-triazine], and electron donors with oxidn. potential (Eox) such that $0 < Eox \leq 1.32$ (V, vs. SCE). A mixt. of 11.85 parts each triethylene				

glycol dimethacrylate and bisphenol A diglycidyl ether dimethacrylate, 76 parts filler, and 0.25 part each camphorquinone (I), Ph2I+PF6- (II), and (dimethylamino)phenethyl alc. (III) was poured in a mold to 6 mm depth and cured 20 s with visible light, giving a composite with Barcol hardness 60 (top) and 30 (bottom), vs. no cure with I and II only and 56 and 2, resp., with I and III only.

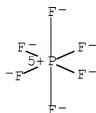
IT 58109-40-3, Diphenyliodonium hexafluorophosphate  
(ternary photoinitiator systems contg., for photocurable monomer compns.)  
RN 58109-40-3 HCA  
CN Iodonium, diphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 16919-18-9

CMF F6 P

CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I



IC ICM C08F002-50  
ICS G03C001-68; A61K006-08  
CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 63  
ST photoinitiator unsatd monomer compn; aryliodonium salt  
photoinitiator system; sensitizer ternary photoinitiator system;  
electron donor photoinitiator system; camphorquinone photosensitizer

photoinitiator system; dental adhesive photocurable compn

IT Dyes  
 (photosensitizers, ternary photoinitiator systems contg., for photocurable monomer compns.)

IT Electron donors  
 (ternary photoinitiator systems contg., for photocurable monomer compns.)

IT Dental materials and appliances  
 (orthodontic brackets, photocurable adhesives for, ternary photoinitiator systems in)

IT 50-81-7, L-Ascorbic acid, uses and miscellaneous 62-53-3, Aniline, uses and miscellaneous 99-97-8, N,N-Dimethyl-p-toluidine 100-10-7, p-(Dimethylamino)benzaldehyde 102-54-5, Ferrocene 102-71-6, Triethanolamine, uses and miscellaneous 103-83-3 107-10-8, Propylamine, uses and miscellaneous 109-46-6, 1,3-Dibutylthiourea 122-79-2, Phenyl acetate 127-19-5 135-77-3, 1,2,4-Trimethoxybenzene 150-78-7, p-Dimethoxybenzene 594-07-0, Carbamodithioic acid 603-34-9, Triphenylamine 603-35-0, Triphenylphosphine, uses and miscellaneous 632-22-4, Tetramethylurea 680-31-9, Hexamethylphosphoramide, uses and miscellaneous 824-79-3, Sodium p-toluenesulfinate 2050-92-2, Dipentylamine 2422-89-1, Tetrabutylthiourea 4441-17-2, Tripiperidinophosphine oxide 4840-75-9, Tris(dimethylamino)phenylsilane 13368-42-8 13408-63-4, Ferrocyanide 21331-86-2, Trisdimethylsilylamine 33985-71-6, 9-Julolidinecarboxaldehyde 50438-75-0  
 (electron donor, ternary photoinitiator systems contg., for photocurable monomer compns.)

IT 61-73-4, Methylene blue 81-93-6, Phenosafranine 82-38-2, 1-Methylaminoanthraquinone 86-39-5, 2-Chlorothioxanthone 90-94-8, Michler's ketone 548-62-9, Crystal violet 569-64-2, Malachite green 581-64-6, Thionin 1742-91-2, 3,3'-Dimethylthiocarbocyanine iodide 2321-07-5, Fluorescein 3785-05-5, 2,6-Bis[4-(Dimethylamino)styryl]-1-methylpyridinium iodide 6552-62-1 6673-14-9, 1,3-Bis(4-Dimethylaminobenzylidene)acetone 6673-15-0, 1,2,2-Tricyano-1-(4-dimethylaminophenyl)ethylene 10373-78-1, Camphorquinone 11121-48-5, Rose Bengal 14323-06-9 21856-78-0 37251-80-2, Toluidine blue 50721-69-2 51395-88-1, Eosin yellow 55804-66-5 55804-67-6 72955-45-4 77831-38-0 119233-95-3, 3-(p-Dimethylaminocinnamoyl)-7-(dimethylamino)coumarin 119233-96-4 119233-97-5 119233-98-6 119233-99-7 119259-88-0  
 (photosensitizer, ternary photoinitiator systems contg., for photocurable monomer compns.)

IT 119408-82-1  
 (polyester cloth impregnated with photocured, as substrate for abrasive)

IT 53109-40-3, Diphenyliodonium hexafluorophosphate  
(ternary photoinitiator systems contg., for photocurable  
monomer compns.)

L102 ANSWER 15 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 109:150953 HCA Full-text

OREF 109:25111a,25114a

TI Photocurable acrylate polymer compositions for  
sanding materials

PA Minnesota Mining and Manufacturing Co., USA

SO Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
PI	JP 63047068	A	19880227	JP 1987-199676	198708 10
				<--	
	US 4751138	A	19880614	US 1986-895315	198608 11
				<--	
	ZA 8704819	A	19890222	ZA 1987-4819	198707 02
				<--	
	AU 8775389	A	19880218	AU 1987-75389	198707 09
				<--	
	AU 595629	B2	19900405		
	CA 1285395	C	19910702	CA 1987-542147	198707 15
				<--	
	BR 8704055	A	19880405	BR 1987-4055	198708 07
				<--	

PRAI US 1986-895315 A 19860811 <--

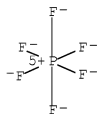
AB Title compns. comprise unsatd. ethylenic compds., 1,2-epoxide-contg.  
compds., and photoinitiators selected from salts of onium cation  
and halogen-contg. metal or metalloid anion, ≥1 salt of an org. cationic

metal complex and a halogen-contg. metal or metalloid anionic complex, and  $\geq 1$  free radical initiator. Thus, Al2O3 (grade 50) (739 g/m2) was dropped onto phenolic resin (I)-coated Vulcan fiber paper, coated (as a sizing layer) with mixt. of SR 444 40, 1:1 mol ratio Epon 828-acrylic acid copolymer 3.0, N-vinyl-2-pyrrolidone 30, filler 100, 60% FX 512 soln. 0.46, and Irgracure 651 1.50 parts at 293 g/m2, and photocured to give a sample exhibiting amt. of cutting (steel 1018) 143 g at 0.70 kg/cm2, vs. 115 when I was used for the sizing layer.

IT 58109-40-3  
 (initiators, for epoxy-acrylate copolymer, for, sandpaper manuf.)  
 RN 58109-40-3 HCA  
 CN Iodonium, diphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 16919-18-9  
 CMF F6 P  
 CCI CCS



CM 2

CRN 10182-84-0  
 CMF C12 H10 I



IC ICM B24D011-00  
 ICS C08J005-14  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 43  
 ST phenolic resin sandpaper; acrylate copolymer sandpaper; bisphenol A

copolymer sandpaper; acrylic acid copolymer sandpaper;  
vinylpyrrolidone copolymer sandpaper; photoinitiator curing  
epoxy acrylate; sandpaper epoxy acrylate; free radical initiator  
curing epoxy acrylate

- IT Epoxy resins, uses and miscellaneous  
(curing of, free radical and photoinitiators for, for  
sandpaper)
- IT Polymerization catalysts  
(ring-opening, free-radical, for epoxy-acrylate  
copolymer, for sandpaper manuf.)
- IT 3524-68-3D, polymer with diacryl-modified epoxy resin and  
N-vinylpyrrolidone 92899-80-4 116657-31-9  
(curing of, free radical and photoinitiators for, for  
sandpaper)
- IT 116543-32-9 116543-33-0 116543-34-1 116543-37-4 116543-38-5  
116543-39-6 116543-40-9 116543-41-0 116629-25-5 116629-26-6  
116629-83-5 116738-15-9 116743-63-6  
(curing of, free radical and photoinitiators for, in  
sandpaper manuf.)
- IT 116543-35-2 116543-36-3 116629-27-7 116629-28-8  
(curing of, free radical and photoinitiators for,  
sanding paper)
- IT 5495-84-1 24650-42-8 57840-38-7 58109-40-3  
(initiators, for epoxy-acrylate copolymer, for, sandpaper manuf.)

L102 ANSWER 16 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 109:111081 HCA Full-text

OREF 109:18531a,18534a

TI Photosensitizers and polymerizable compositions

IN DeVoe, Robert J.; Mitra, Smarajit

PA Minnesota Mining and Manufacturing Co., USA

SO Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

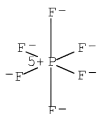
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 260877	A2	19880323	EP 1987-308008	198709 10
				<--	
	EP 260877	A3	19891129		
	EP 260877	B1	19931103		
	R: CH, DE, FR, GB, IT, LI				
	US 4792506	A	19881220	US 1986-909823	

				198609
				19
			<--	
AU 8776755	A	19880324	AU 1987-76755	198708
				11
			<--	
AU 590952	B2	19891123		
CA 1286831	C	19910723	CA 1987-544309	198708
				12
			<--	
JP 63095202	A	19880426	JP 1987-234694	198709
				18
			<--	
JP 2573963	B2	19970122		
PRAI US 1986-909823	A	19860919	<--	
AB	Mannich polymers useful as efficient photosensitizers for onium salts for polymn. of vinyl monomers are prepd. Thus, a mixt. of piperazine hexahydrate 19.4 in MeOH 20 was added slowly with AcOH 12, and mixed with 37% HCHO 16.2 parts on an ice bath for 1 h and then room temp. overnight. Adding dropwise a soln. of 12 parts acetophenone in 20 parts DMF to the mixt., and heating at 70° for 16 h gave a polymer (I) after pptn. in an aq. NaOH soln. Irradiating (366 nm) a soln. of pentaerythritol tetraacrylate 5, MEK 44.5, and diphenyliodonium hexafluorophosphate 0.5 part contg. enough I (to absorbance at 366 nm 0.051 ± 0.004) gave gel time 1.50 min vs. 6.5 min for Michler's ketone in place of I.			
IT	58109-40-3, Diphenyliodonium hexafluorophosphate (photoinitiator, for vinyl polymn., Mannich polymer-based sensitizers for)			
RN	58109-40-3 HCA			
CN	Iodonium, diphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)			
CM	1			
CRN	16919-18-9			
CMF	F6 P			
CCI	CCS			



CM 2

CRN 10182-84-0

CMF C12 H10 I



IC ICM C08F002-50  
ICS G03C001-68  
CC 35-3 (Chemistry of Synthetic High Polymers)  
IT Polymerization  
(photochem., radical, of vinyl monomers,  
photosensitizers for, Mannich polymers as)  
IT Coating materials  
(photocurable, photosensitizers for, Mannich polymers  
as, for use with onium salts)  
IT 58109-40-3, Diphenyliodonium hexafluorophosphate  
(photoinitiator, for vinyl polymn., Mannich polymer-based  
sensitizers for)

L102 ANSWER 17 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 104:187067 HCA Full-text

OREF 104:29637a,29640a

TI Polymer blends

IN Matsuyama, Akio; Ozawa, Hiroshi; Hirose, Sumio

PA Mitsui Toatsu Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

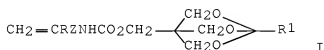
DATE



PI JP 60233108 A 19851119 JP 1984-89331

198405  
07

PRAI JP 1984-89331 19840507 <--  
GI



AB Compns. which can be molded to products with good rigidity and toughness contain the ortho esters I (R = H, Me; R1 = H, alkyl, Ph; Z = CO<sub>2</sub>CnH<sub>2n</sub>, C<sub>6</sub>H<sub>4</sub>CMe<sub>2</sub>; n = 1-8), radical initiators, and cationic initiators. Thus, a mixt. of I (R, R1 = Me; Z = CO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>) 100, tert-BuOOBz 1, and Ph<sub>2</sub>I<sup>+</sup> SbF<sub>6</sub><sup>-</sup> 1 part was molded at 150° and 20 kg/cm<sup>2</sup> for 30 min to give a molding with flexural modulus 320 kg/mm<sup>2</sup>, Charpy impact strength 25 kg-cm/cm<sup>2</sup>, and vol. shrinkage on curing 1.2%.

IT 52754-92-4

(catalyst, for polymn. of ortho ester methacrylates)

RN 52754-92-4 HCA

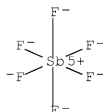
CN Iodonium, diphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 17111-95-4

CMF F6 Sb

CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I

Ph-I<sup>+</sup>-Ph

IC ICM C08F012-26

ICS C08F020-36

ICA C07D493-08

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 37

IT Polymerization catalysts

(radical, for ortho ester acrylate derivs.)

IT 94-36-0, uses and miscellaneous 109-63-7 592-39-2 614-45-9  
52754-92-4

(catalyst, for polymn. of ortho ester methacrylates)

L102 ANSWER 18 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 99:39315 HCA Full-text

OREF 99:6189a,6192a

TI Epoxy resin compositions for photocurable  
prepregs

PA Mitsubishi Electric Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 58008723	A	19830118	JP 1981-106775	198107 08

<--

JP 62001649 B 19870114

PRAI JP 1981-106775 19810708 <--

AB Polymer compns. for binding tapes which are crosslinked to a  
precisely reproducible extent by heating after impregnation, then  
fully cured after application by exposure to light, comprise epoxy  
resins 40-70, compds. having  $\geq 2$  unsatd. groups 28-58, thermally

activated free-radical catalysts 0.1-5, and photochem. activated Lewis acid-producing catalysts 0.5-5 parts. Thus, a glycidyl methacrylate-modified unsatd. polyester, UE 8200 [78810-41-0] epoxy acrylate, styrene, Epikote 1001 [25068-38-6] and Epikote 828 epoxy resins, MEK peroxide [1338-23-4], and 4,4'-dimethyldiphenyliodonium hexafluorophosphate [60565-88-0] were combined to form an adhesive compn., which was applied to glass fiber tape and heated to 80°, 100°, and then 120° for 30 min (each) to obtain a non-tacky flexible prepreg tape. When wrapped around articles and cured by an 80 W/cm, 2.5 kW high-pressure Hg lamp at 100 mm for 40 s, the hardened tape had excellent mech., elec., and thermal properties and chem. resistance.

IT 58109-40-3

(crosslinking catalysts, in epoxy resin compns. for photocurable preregs)

RN 58109-40-3 HCA

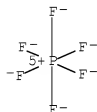
CN Iodonium, diphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 16919-18-9

CMF F6 P

CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I



IC C08G059-18

ICA C08J005-24  
CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 35  
ST thermal photochem crosslinking epoxy prepreg; UV curable  
epoxy binding tape  
IT Onium compounds  
(crosslinking catalysts, in epoxy resin compns. for  
photocurable prepregs)  
IT Lewis acids  
(crosslinking catalysts, in photocurable epoxy resin  
prepregs)  
IT Adhesive tapes  
(photocuring, unsatd. epoxy resin compns. for)  
IT Polyesters, uses and miscellaneous  
(thermal crosslinking agents, in epoxy resin compns. for  
photocurable prepregs)  
IT Epoxy resins, uses and miscellaneous  
(unsatd. resin blends, for photocurable prepregs)  
IT Crosslinking catalysts  
(photochem., in unsatd. epoxy resin compns. for  
photocurable prepregs)  
IT Crosslinking catalysts  
(radical, in unsatd. epoxy resin compns. for  
photocurable prepregs)  
IT 57835-99-1 58109-40-3 60565-88-0  
(crosslinking catalysts, in epoxy resin compns. for  
photocurable prepregs)  
IT 94-36-0, uses and miscellaneous 614-45-9 1338-23-4  
(crosslinking catalysts, with photochem. catalysts, in unsatd.  
epoxy compns. for photocurable prepregs)  
IT 109-17-1 15625-89-5 17831-71-9 78810-41-0 86338-98-9  
(thermal crosslinking agents, in epoxy resin compns. for  
photocurable prepregs)  
IT 25068-38-6  
(unsatd. resin blends, for photocurable prepregs)

L102 ANSWER 19 OF 19 HCA COPYRIGHT 2008 ACS on STN

AN 92:172478 HCA Full-text

OREF 92:27819a,27822a

TI Photopolymerization composition useful on printing plates

IN Rousseau, Alan David

PA Minnesota Mining and Manufacturing Co., USA

SO Brit. UK Pat. Appl., 22 pp.

CODEN: BAXXDU

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	GB 2020297	A	19791114	GB 1979-14903	197904 30
				<--	
	GB 2020297	B	19830427		
	SE 7903709	A	19791102	SE 1979-3709	197904 27
				<--	
	SE 444991	B	19860520		
	SE 444991	C	19860828		
	FR 2425094	A1	19791130	FR 1979-10908	197904 27
				<--	
	FR 2425094	B1	19850719		
	CA 1122999	A1	19820504	CA 1979-326501	197904 27
				<--	
	AU 7946503	A	19791108	AU 1979-46503	197904 30
				<--	
	AU 524592	B2	19820923		
	DE 2917483	A1	19791115	DE 1979-2917483	197904 30
				<--	
	DE 2917483	C2	19910124		
	BR 7902646	A	19791127	BR 1979-2646	197904 30
				<--	
	JP 54144497	A	19791110	JP 1979-53993	197905 01
				<--	
	GB 2104086	A	19830302	GB 1982-21270	198207 22
				<--	
	GB 2104086	B	19830706		
PRAI	US 1978-901480	A	19780501	<--	

GB 1979-14903 A3 19790430 <--

AB The title compns. contain an org. film-forming polymer 10-60, a free radical-polymerizable ethylenically unsatd. monomer 10-60, a photoinitiator 0.1-12, and an acrylate-modified polyurethane 10-60%. Thus, a soln. was prepd. contg. pentaerythritol tetraacrylate 3.32,  $\epsilon$ -caprolactone- dipentaerythritol-2-hydroxyethyl methacrylate-2,4-tolylene diisocyanate block copolymer 1.87, Ph<sub>2</sub>IPF<sub>6</sub> 0.34, Et<sub>3</sub>N 0.17, (Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>-p)<sub>2</sub>CO 0.17, poly(vinyl butyral) 2.50, and ProH/H<sub>2</sub>O azeotrope 91.62 parts. The soln. was coated onto anodized Al, dried, exposed 13 s 1 m from a 5000 W C arc, and developed by wiping with a soln. contg. 0.63% Na metasilicate and 0.23% Na alkyl naphthalene sulfonate.

IT 58109-40-3  
(photoinitiator, for photocurable coatings for printing plates)

RN 58109-40-3 HCA

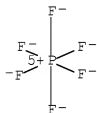
CN Iodonium, diphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 16919-18-9

CMF F6 P

CCI CCS



CM 2

CRN 10182-84-0

CMF C12 H10 I



IC G03C001-68; C08F002-46; C08G018-34; C08G018-67

- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
Section cross-reference(s): 36
- IT Printing plates  
(photocurable comps. for, contg. polyvinyl acetals, acrylate-modified polyurethanes, and photoinitiators)
- IT Urethane polymers, uses and miscellaneous  
(acrylate-modified, block, oligomeric, photocurable comps. contg. polyacrylic esters, polyacetals and, for printing plates)
- IT Vinyl acetal polymers  
(butyrals, photocurable comps. contg. acrylate-modified urethane oligomers, pentaerythritol tetraacrylate and, for printing plates)
- IT Vinyl acetal polymers  
(butyrals, propenals, photocurable comps. contg. acrylate-modified urethane oligomers, pentaerythritol tetraacrylate and, for printing plates)
- IT Vinyl acetal polymers  
(formals, photocurable comps. contg. acrylate-modified urethane oligomers, pentaerythritol tetraacrylate and, for printing plates)
- IT Crosslinking agents  
(photochem., diphenyliodonium hexafluorophosphate, for photocurable printing plate coating comps.)
- IT 868-77-9D, polymers with poly(propylene oxide)triol and 2,4-tolylene diisocyanate, succinate 25322-69-4D, triol derivs., polymers with 2-hydroxyethyl methacrylate and tolylene diisocyanate, succinate 26471-62-5D, polymers with 2-hydroxyethyl methacrylate and poly(propylene glycol)triol derivs., succinate 73412-47-2 (block, photocurable comps. contg., for printing plates)
- IT 58109-40-3  
(photoinitiator, for photocurable coatings for printing plates)
- IT 86-39-5 90-94-8 91-44-1 2382-96-9 6143-80-2 15546-43-7 26708-04-3 29777-36-4 42573-57-9 73376-29-1  
(photosensitizer, for photocurable coatings for printing plates)

=> D L105 1-4 BIB ABS HITSTR HITIND

L105 ANSWER 1 OF 4 HCA COPYRIGHT 2008 ACS on STN

AN 138:392962 HCA Full-text

TI E-beam curing effects on the etch and CD-SEM stability of  
193-nm resists

AU Padmanaban, Munirathna; Alemy, Eric L.; Dammel, Ralph R.; Kim,  
Woo-Kyu; Kudo, Takanori; Lee, SangHo; McKenzie, Douglas S.; Orsi,  
Aldo; Rahman, Dalil; Chen, Wan-Lin; Sadjadi, Reza M.; Livesay,  
William R.; Ross, Matthew F.

CS AZ Electron. Mater., Clariant Corp., Somerville, NJ, 08807, USA

SO Proceedings of SPIE-The International Society for Optical  
Engineering (2002), 4690(Pt. 1, Advances in Resist  
Technology and Processing XIX), 606-614  
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

AB Electron beam (e-beam) curing techniques are known to improve etch  
and crit. dimension (CD)-SEM stability of 248 and 193 nm resists.  
The effects of three different e-beam curing processes (std., LT and  
ESC) on the methacrylate and hybrid type 193 nm resists were studied  
with respect to resin chem. changes, resist film shrinkage, pattern  
profiles, etch rates, and CD SEM stability. Both methacrylate and  
hybrid type 193 nm resists lost carbonyl groups from the resins, with  
possibly a redn. in the free vol. leading to improved etch  
resistance/selectivity. Methacrylate resist films shrink ca. 22-24%  
and hybrid resist films shrink ca. 23-27%. The LT process shrinks  
the least compared to the ESC and std. process. The ESC and LT  
processes were found to stabilize the patterns uniformly compared to  
the std. process. Etch rate, selectivity and resist surface  
roughness after etch of both methacrylate and hybrid resists were  
improved using the e-beam curing process. E-beam curing drastically  
reduces the CD SEM shrinkage (from ca. 15% to 2-5%); however,  
considerable shrinkage occurs during the curing process itself.

IT 144317-44-2, Triphenylsulfonium nonaflate  
(photoacid generator; effects of electron-beam curing  
techniques on crit. dimensions/shrinkage/etch rates/SEM stability  
of 248 and 193 nm photoresists)

RN 144317-44-2 HCA

CN Sulfonium, triphenyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-  
butanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 45187-15-3



CMF C4 F9 O3 S

-O3S-(CF2)3-CF3

CM 2

CRN 18393-55-0

CMF C18 H15 S



- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST electron beam curing vacuum UV photoresist crit dimension stability
- IT Photoresists  
(chem. amplified; effects of electron-beam curing techniques on crit. dimensions/shrinkage/etch rates/SEM stability of 248 and 193 nm photoresists)
- IT Electron beams  
Surface roughness  
(effects of electron-beam curing techniques on crit. dimensions/shrinkage/etch rates/SEM stability of 248 and 193 nm photoresists)
- IT Etching  
(plasma; effects of electron-beam curing techniques on crit. dimensions/shrinkage/etch rates/SEM stability of 248 and 193 nm photoresists)
- IT 177080-68-1, 2-Methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 392153-86-5, tert-Butyl 5-norbornene-2-carboxylate-maleic anhydride-2-methyl-2-adamantylmethacrylate-mevalonic lactone methacrylate copolymer  
(effects of electron-beam curing techniques on crit. dimensions/shrinkage/etch rates/SEM stability of 248 and 193 nm photoresists)
- IT 121-44-8, Triethylamine, properties  
(effects of electron-beam curing techniques on crit. dimensions/shrinkage/etch rates/SEM stability of 248 and 193 nm photoresists)

IT 144317-44-2, Triphenylsulfonium nonaflate  
(photoacid generator; effects of electron-beam curing  
techniques on crit. dimensions/shrinkage/etch rates/SEM stability  
of 248 and 193 nm photoresists)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L105 ANSWER 2 OF 4 HCA COPYRIGHT 2008 ACS on STN

AN 137:202031 HCA Full-text

TI Preparation and patterning process of silicon-containing chemical  
amplification positive resist compositions

IN Takeda, Takanobu; Hatakeyama, Jun; Ishihara, Toshinobu; Kubota,  
Tohru; Kubota, Yasufumi

PA Shin-Etsu Chemical Co., Ltd., Japan

SO Eur. Pat. Appl., 33 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 1236745	A2	20020904	EP 2002-251419	200202 28
				<--	
	EP 1236745	A3	20040324		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2002348332	A	20021204	JP 2002-47351	200202 25
				<--	
	JP 3915895	B2	20070516		
	TW 245774	B	20051221	TW 2002-91103644	200202 27
				<--	
	US 20020168581	A1	20021114	US 2002-85935	200203 01
				<--	
	US 6994945	B2	20060207		
PRAI	JP 2001-56543	A	20010301	<--	
AB	Novel silicon-contg. polymers, which are obtained by copolymg. vinylsilane with a compd. having a low electron d. unsatd. bond such as maleic anhydride, maleimide derivs. or tetrafluoroethylene, are				

suitable as the base resin in chem. amplified pos. resist compns. used for micropatterning in a process for the fabrication of semiconductor devices. The resist compns., which are sensitive to high-energy radiation, such as deep-UV light, laser beams, electron beams or X-rays, can form high aspect ratio patterns with high sensitivity and resolu. as well as improved resistance to oxygen or halogen gas plasma etching. Thus, maleic anhydride and trimethylvinylsilane were polymd. in THF using radical polymn. technique; the silicone polymer, photoacid generator, dissoln. inhibitor were thoroughly dissolved in propylene glycol monomethyl ether acetate; the resist soln. was spin coated onto cured DUV-30/novolac resist substrate and then baked at 100° for 90 s to form a resist film of 0.2 µm, followed by exposing to laser beam, baking at 100° for 90 s, and developing in TMAH to obtain a pos. pattern; the resist pattern was then evaluated in sensitivity, resolu., and etc.

IT 66003-78-9

(photoacid generator; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)

RN 66003-78-9 HCA

CN Sulfonium, triphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 37181-39-8

CMF C F3 O3 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



IC ICM C08F030-08  
 ICS G03F007-075; C08G077-00  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38, 76  
 IT 66003-76-7 66003-78-9  
 (photoacid generator; silicon-contg. chem. amplification pos.  
 resist compns. and patterning process thereof)

L105 ANSWER 3 OF 4 HCA COPYRIGHT 2008 ACS on STN  
 AN 134:6063 HCA Full-text  
 TI Radiation curable coating composition  
 IN Freche, Patrick Andre Roger; Duval, Franck Constant Emile  
 PA The Goodyear Tire & Rubber Company, USA  
 SO Eur. Pat. Appl., 8 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 1054044	A1	20001122	EP 2000-109197	200005 09

<--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO  
 US 6162842 A 20001219 US 1999-313450  
 199905  
 18

<--

CA 2304905	A1	20001118	CA 2000-2304905	200004 10
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<--

BR 2000002101	A	20010228	BR 2000-2101	200005 10
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PRAI US 1999-313450 A 19990518 <--  
 AB A radiation curable coating compn. applicable to any type of  
 substrate comprises a crosslinked polymeric resin contg. repeating  
 units derived from ≥1 member selected from the group consisting of  
 acrylate monomers and vinyl arom. monomers and a crosslinking  
 monomer, an acrylate dilg. monomer, and a photocatalyst. A process  
 for coating a three- dimensional substrate comprises applying the  
 radiation curable coating compn. to the surface of the substrate and

exposing the surface of the substrate to radiation to cure the coating onto the surface of the substrate. Thus, a coating was prepd. from 1,6-hexanediol diacrylate 80, Piloway G20 20, and benzophenone 5 parts and applied onto the non-horizontal surface of a paper and cured by exposing it to UV light with no evidence of running or sagging.

- IT 18393-55-0, Triphenyl sulfonium  
 (photocatalyst; prepn. of radiation curable coating  
 applicable to any type of substrate compn. contg. acrylic and  
 arom. vinyl monomers)
- RN 18393-55-0 HCA
- CN Sulfonium, triphenyl- (CA INDEX NAME)



- IC ICM C09D004-00
- ICS C08F222-10; C08F222-00; C08F220-10; C08F220-00; C08F257-02;  
 C08F265-06
- CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)  
 Section cross-reference(s): 42
- ST radiation curable paper coating manuf; acrylic vinyl arom  
 monomer photocatalyst coating
- IT Epoxy resins, reactions  
 (acrylates, dilg. monomer; prepn. of radiation curable  
 coating applicable to any type of substrate compn. contg. acrylic  
 and arom. vinyl monomers)
- IT Monomers  
 (acrylic; prepn. of radiation curable coating  
 applicable to any type of substrate compn. contg. acrylic and  
 arom. vinyl monomers)
- IT Soybean oil  
 (epoxidized, acrylated epoxy, dilg. monomer; prepn. of radiation  
 curable coating applicable to any type of substrate  
 compn. contg. acrylic and arom. vinyl monomers)
- IT Linseed oil  
 (epoxidized, dilg. monomer; prepn. of radiation curable  
 coating applicable to any type of substrate compn. contg. acrylic  
 and arom. vinyl monomers)
- IT Onium compounds  
 (iodonium, diaryl titanocenes, photocatalyst; prepn. of radiation  
 curable coating applicable to any type of substrate  
 compn. contg. acrylic and arom. vinyl monomers)
- IT Metallocenes

Onium compounds  
 (photocatalyst; prepn. of radiation curable coating  
 applicable to any type of substrate compn. contg. acrylic and  
 arom. vinyl monomers)

IT Polymerization catalysts  
 (photopolymn.; prepn. of radiation curable coating  
 applicable to any type of substrate compn. contg. acrylic and  
 arom. vinyl monomers)

IT Crosslinking agents  
 UV radiation  
 (prepn. of radiation curable coating applicable to any  
 type of substrate compn. contg. acrylic and arom. vinyl monomers)

IT Coating materials  
 (radiation-curable; prepn. of radiation curable  
 coating applicable to any type of substrate compn. contg. acrylic  
 and arom. vinyl monomers)

IT Aromatic compounds  
 Vinyl compounds, reactions  
 (vinyl arenes; prepn. of radiation curable coating  
 applicable to any type of substrate compn. contg. acrylic and  
 arom. vinyl monomers)

IT 18393-55-0, Triphenyl sulfonium 24650-42-8, Benzil  
 dimethyl ketal  
 (photocatalyst; prepn. of radiation curable coating  
 applicable to any type of substrate compn. contg. acrylic and  
 arom. vinyl monomers)

IT 119-61-9, Benzophenone, uses  
 (prepn. of radiation curable coating applicable to any  
 type of substrate compn. contg. acrylic and arom. vinyl monomers)

IT 308261-06-5P  
 (prepn. of radiation curable coating applicable to any  
 type of substrate compn. contg. acrylic and arom. vinyl monomers)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L105 ANSWER 4 OF 4 HCA COPYRIGHT 2008 ACS on STN

AN 102:80391 HCA Full-text

OREF 102:12615a,12618a

TI Ultraviolet radiation curable paints

AU Grosset, Anne M.; Su, Wei Fang A.

CS Westinghouse Res. Dev. Cent., Pittsburgh, PA, 15235, USA

SO Industrial & Engineering Chemistry Product Research and Development  
 (1985), 24(1), 113-20

CODEN: IEPRA6; ISSN: 0196-4321

DT Journal

LA English

AB Coatings were developed for curing by UV radiation, which requires only 1/3 the energy of conventional thermal curing . One-coat enamels, topcoats, and primers were developed which gave hard, adherent films after UV irradiation. They could be cured by photoinduced radical or cationic polymerization, depending on formulation. Nonfocused UV radiation could cure the coatings on 3-dimensional metal substrates, offering potential in finishing such industrial products as appliances, metal furniture, vehicles, and elec. equipment.

IT 57835-99-1

(catalysts, for crosslinking of coatings by light)

RN 57835-99-1 HCA

CN Sulfonium, triphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

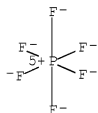


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



CC 42-10 (Coatings, Inks, and Related Products)

ST photocurable coating development; crosslinking photochem coating; polyurethane acrylate paint photocurable; catalyst crosslinking photochem; cationic curing photochem

coating  
 IT Coating materials  
     (photocurable, for 3-dimensional  
       substrates, development of)  
 IT 84-51-5 86-39-5 105-59-9 110-91-8, uses and miscellaneous  
     134-81-6 57835-99-1 86546-43-2 86546-44-3  
     (catalysts, for crosslinking of coatings by light)  
 IT 25085-98-7 26142-30-3 86546-75-0  
     (coatings, photocurable)  
 IT 106-74-1 2426-08-6  
     (reactive diluents, for photocurable coatings)

=> D L106 1-22 BIB ABS HITSTR HITIND

L106 ANSWER 1 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 138:245631 HCA Full-text  
 TI Photopolymerizable composition  
 IN Yanaka, Hiromitsu  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Eur. Pat. Appl., 30 pp.  
 CODEN: EPXXDW

DT Patent  
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1291718	A2	20030312	EP 2002-20417	200209 11
				<--	
	EP 1291718	A3	20031015		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	JP 2003177527	A	20030627	JP 2002-264220	200209 10
				<--	
	US 20030129524	A1	20030710	US 2002-237707	200209 10
				<--	
	US 6890701	B2	20050510		
PRAI	JP 2001-275072	A	20010911	<--	
OS	MARPAT 138:245631				



AB The present invention relates to a photopolymerizable compn. for neg.-working lithog. printing plate which comprises (A) a polymerizable compd. having at least one radical- polymerizable ethylenically unsatd. double bond per mol. and a cohesive energy d. of not smaller than 500 J/cm<sup>3</sup>, (B) a radical polymn. initiator and (C) a binder polymer and cures when exposed to light.

IT 377780-83-1

(polymn. initiator; photopolymerizable compn. for neg.-working lithog. printing plates)

RN 377780-83-1 HCA

CN Sulfonium, triphenyl-,  $\alpha$ -oxobenzeneacetic acid (1:1) (CA INDEX NAME)

CM 1

CRN 50572-54-8

CMF C8 H5 O3



CM 2

CRN 18393-55-0

CMF C18 H15 S



IC ICM G03F007-029

ICS B41C001-10

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 377780-83-1

(polymn. initiator; photopolymerizable compn. for neg.-working lithog. printing plates)

AN 137:192800 HCA Full-text  
TI Photopolymerizable composition  
IN Aoshima, Keitaro; Fujimaki, Kazuhiro  
PA Fuji Photo Film Co., Ltd., Japan  
SO Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 1235107	A1	20020828	EP 2002-3257	200202 21
				<--	
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2002249504	A	20020906	JP 2001-46615	200102 22
				<--	
	US 20020160295	A1	20021031	US 2002-73854	200202 14
				<--	
	US 6838222	B2	20050104		
PRAI	JP 2001-46615	A	20010222	<--	
OS	MARPAT 137:192800				
AB	The present invention relates to a photopolymerizable compn. that is cured with visible light or an IR laser and is used as a recording layer in a neg. planog. printing plate precursor. The photopolymerizable compn. is cured by exposure and includes (A) a polymerizable compd. that is solid at 25°C and has at least one radical-polymerizable ethylenically unsatd. double bond in a mol., (B) a radical polymn. initiator, (C) a binder polymer and, as required, (D) a compd. generating heat by IR exposure.				
IT	377780-83-1				
	(polymn. initiator; photopolymerizable compn. for neg. planog. printing plate precursor contg.)				
RN	377780-83-1	HCA			
CN	Sulfonium, triphenyl-, $\alpha$ -oxobenzeneacetic acid (1:1) (CA INDEX NAME)				
CM	1				
CRN	50572-54-8				

CMF C8 H5 O3



CM 2

CRN 18393-55-0

CMF C18 H15 S



IC ICM G03F007-029

ICS G03F007-031

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 377780-83-1

(polymn. initiator; photopolymerizable compn. for neg. planog. printing plate precursor contg.)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L106 ANSWER 3 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 136:71347 HCA Full-text

TI Photocuring resin compositions,  
photocuring decorative sheets and molded articles, and  
production process

IN Okazaki, Shougo; Kakuno, Yoko; Suemura, Kenji; Watanabe, Hiroyuki  
PA Mitsubishi Rayon Co., Ltd., Japan

SO Eur. Pat. Appl., 32 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

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PI	EP 1170109	A1	20020109	EP 2001-116209	200107 04
				<--	
	EP 1170109	B1	20050330		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002080550	A	20020319	JP 2001-100794	200103 30
				<--	
	JP 4046482	B2	20080213		
	JP 2002079621	A	20020319	JP 2001-101989	200103 30
				<--	
	US 20020032250	A1	20020314	US 2001-897124	200107 03
				<--	
	US 6646022	B2	20031111		
	CN 1331265	A	20020116	CN 2001-117581	200107 05
				<--	
PRAI	JP 2000-203809	A	20000705	<--	
	JP 2000-203849	A	20000705	<--	
	JP 2001-101989	A	20010330	<--	
AB	A photocuring resin compn. comprises a thermoplastic resin (a-1) having a radically polymerizable unsatd. pendant group and a photopolymerization initiator (a-2) and substantially not including a crosslinking compd. other than (a-1). A photocuring sheet comprises a photocuring resin compn. (A) laminated on a substrate sheet (B).				
IT	57840-38-7, Triphenylsulfonium hexafluoroantimonate (photocurable decorative sheets and molded articles having good appearance, mar, weather, and chem. resistance)				
RN	57840-38-7 HCA				
CN	Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA INDEX NAME)				
CM	1				
CRN	18393-55-0				
CMF	C18 H15 S				

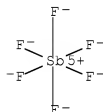


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM B29C045-14

ICS C09D133-04; C08F299-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38

ST photocuring decorative sheet molding

IT Laminated plastics, uses

(decorative, printable; photocurable decorative sheets  
and molded articles having good appearance, mar, weather, and  
chem. resistance)

IT Ethylene-propylene rubber

Polycarbonates, uses

(photocurable decorative sheets and molded articles  
having good appearance, mar, weather, and chem. resistance)

IT Coating materials

(photocurable; photocurable decorative sheets  
and molded articles having good appearance, mar, weather, and  
chem. resistance)

IT 9010-79-1

(ethylene-propylene rubber, photocurable decorative  
sheets and molded articles having good appearance, mar, weather,  
and chem. resistance)

IT 947-19-3, 1-Hydroxycyclohexylphenyl ketone 57840-38-7,

Triphenylsulfonium hexafluoroantimonate

(photocurable decorative sheets and molded articles  
having good appearance, mar, weather, and chem. resistance)

IT 26355-01-1DP, 2-Hydroxyethyl methacrylate-methyl methacrylate  
copolymer, reaction products with methacryloyloxyethyl isocyanate  
30674-80-7DP, Karenz MOI, reaction products with hydroxyethyl  
methacrylate copolymer 99638-49-0P, Glycidyl methacrylate-methyl  
methacrylate copolymer acrylate 145807-42-7P, Glycidyl  
methacrylate homopolymer acrylate ester  
(photocurable decorative sheets and molded articles  
having good appearance, mar, weather, and chem. resistance)

IT 9003-56-9, Acrylonitrile-butadiene-styrene copolymer 25852-37-3,  
Butyl acrylate-methyl methacrylate copolymer 50926-11-9, ITO  
158707-89-2, SN 100P  
(photocurable decorative sheets and molded articles  
having good appearance, mar, weather, and chem. resistance)

IT 7631-86-9, Silica, uses  
(surface-treated; photocurable decorative sheets and  
molded articles having good appearance, mar, weather, and chem.  
resistance)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L106 ANSWER 4 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 135:257589 HCA Full-text

TI Polymerizable compositions containing  
radical initiators with no acid release

IN Toba, Yasumasa; Uesugi, Takahiko

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	
PI	JP 2001261727	A	20010926	JP 2000-77501	200003 21

<--

PRAI JP 2000-77501 20000321 <--

OS MARPAT 135:257589

AB The compns., useful for photoresists, coatings, etc., comprise  
polymn. initiators Z+ArlNHCH2COO- (Arl = aryl; Z+ = cations selected  
from iodonium, iron arenium, sulfonium, phosphonium, ammonium) and  
radically polymerizable compds. Thus, a compn. comprising

pentaerythritol triacrylate and diphenyliodonium phenylglycine salt was UV-irradiated to show good curability and no acidity.

IT 362055-80-9P

(polymerizable compns. contg. radical  
initiators with no acid release)

RN 362055-80-9 HCA

CN Sulfonium, triphenyl-, salt with N-phenylglycine (1:1) (9CI) (CA  
INDEX NAME)

CM 1

CRN 58013-93-7

CMF C8 H8 N O2

$\text{PhNH}-\text{CH}_2-\text{CO}_2^-$

CM 2

CRN 18393-55-0

CMF C18 H15 S



IT 3353-89-7, Triphenylsulfonium bromide  
(polymerizable compns. contg. radical  
initiators with no acid release)

RN 3353-89-7 HCA

CN Sulfonium, triphenyl-, bromide (1:1) (CA INDEX NAME)



●  $\text{Br}^-$

IC ICM C08F002-50

CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 37

ST radical polymn initiator glycinate reduced  
 acidity; diphenyliodonium phenylglycinate initiator pentaerythritol  
 triacrylate polymer

IT Polyoxyalkylenes, preparation  
 (acrylic; polymerizable compns. contg. radical  
 initiators with no acid release)

IT Polymerization catalysts  
 (photopolymn.; polymerizable compns. contg.  
 radical initiators with no acid release)

IT 362055-74-1P 362055-75-2P 362055-76-3P 362055-77-4P  
 362055-79-6P 362055-80-9P 362055-81-0P 362055-82-1P  
 362055-83-2P 362055-84-3P 362055-86-5P 362055-88-7P  
 362055-89-8P 362055-90-1P 362055-91-2P  
 (polymerizable compns. contg. radical  
 initiators with no acid release)

IT 9003-77-4P, 2-Ethylhexyl acrylate homopolymer  
 25053-15-0P, Diallyl phthalate homopolymer 25067-05-4P,  
 Glycidyl methacrylate homopolymer 25101-18-2P,  
 Diethylene glycol dimethacrylate homopolymer  
 25719-51-1P, 2-Ethylhexyl methacrylate homopolymer  
 26022-14-0P, 2-Hydroxyethyl acrylate homopolymer  
 26426-04-0P, Trimethylolpropane trimethacrylate homopolymer  
 27775-58-2P, Pentaerythritol triacrylate homopolymer  
 27813-91-8P, 1,6-Hexanediol dimethacrylate homopolymer  
 28158-16-9P, Ethylene glycol diacrylate homopolymer  
 29323-03-3P, Triallyl trimellitate homopolymer  
 36446-02-3P, Trimethylolpropane triacrylate homopolymer  
 57592-66-2P, Pentaerythritol tetraacrylate homopolymer  
 57592-67-3P, 1,6-Hexanediol diacrylate homopolymer  
 67653-78-5P, Dipentaerythritol hexaacrylate homopolymer  
 94457-89-3P, Polypropylene glycol diacrylate homopolymer  
 108065-49-2P, Pentaerythritol diacrylate homopolymer  
 (polymerizable compns. contg. radical  
 initiators with no acid release)

IT 1483-72-3, Diphenyliodonium chloride 3353-89-7,  
 Triphenylsulfonium bromide 5667-47-0, Dimethylphenacylsulfonium  
 bromide 6048-29-9 6267-01-2 19525-59-8, Potassium  
 N-phenylglycinate 32760-80-8, ( $\eta$ 6-Cumene)( $\eta$ 5-  
 cyclopentadienyl)iron(II) hexafluorophosphate 62051-09-6,  
 Bis(p-tert-butylphenyl)iodonium tetrafluoroborate 74227-35-3,  
 Bis[4-(diphenylsulfonio)phenyl] sulfide bis(hexafluorophosphate)  
 75482-18-7, Diphenyl(p-phenylthiophenyl)sulfonium  
 hexafluorophosphate 78697-24-2 116808-67-4, Diphenyl(p-  
 methoxyphenyl)sulfonium triflate 125740-42-3 134251-02-8,  
 Iron(1+), ( $\eta$ 5-2,4-cyclopentadien-1-yl)( $\eta$ 6-phenyl)-,



hexafluorophosphate(1-) 153049-76-4 214340-30-4  
(polymerizable compns. contg. radical  
initiators with no acid release)

L106 ANSWER 5 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 135:243053 HCA Full-text

TI Polymerizable compositions containing light-sensitive  
radical polymerization catalysts generating no  
acids

IN Toba, Yasumasa; Uesugi, Takahiko

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2001253904	A	20010918	JP 2000-68056	200003 13

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PRAI JP 2000-68056 20000313 <--

OS MARPAT 135:243053

AB The compns. contain polymn. catalysts Z+S-C(:S)NR1R2 (I; R1, R2 =  
alkyl; Z+ = cation chosen from iodonium, iron arenium, and sulfonium)  
and radical polymerizable compds. Thus, a compn. contg. 100 parts  
pentaerythritol triacrylate and 3 parts I (Z+ = di-Ph iodonium; R1,  
R2 = Et) was applied on an Al plate and irradiated with UV to give a  
tack-free acid-free cured film.

IT 360554-27-4P, preparation  
(polymerizable compns. contg. light-sensitive radical  
polymn. catalysts generating no acids)

RN 360554-27-4 HCA

CN Sulfonium, triphenyl-, diethylcarbomodithioate (9CI) (CA INDEX  
NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S



CM 2

CRN 392-74-5

CMF C5 H10 N S2



IT 3353-89-7, Triphenylsulfonium bromide  
(polymerizable compns. contg. light-sensitive radical  
polymn. catalysts generating no acids)  
RN 3353-89-7 HCA  
CN Sulfonium, triphenyl-, bromide (1:1) (CA INDEX NAME)



IC ICM C08F002-50  
ICS C08F020-00  
CC 37-3 (Plastics Manufacture and Processing)  
ST radical polymn catalyst phenyliodonium ethyl  
thiocarbamate; pentaerythritol acrylate polymer tack free  
IT Polymerization catalysts  
(photochem., radical; polymerizable compns.  
contg. light-sensitive radical polymn.  
catalysts generating no acids)  
IT 117744-78-2P, preparation 117744-80-6P, preparation  
360554-23-0P, preparation 360554-24-1P, preparation  
360554-25-2P, preparation 360554-26-3P, preparation  
360554-27-4P, preparation 360554-28-5P, preparation  
360554-29-6P, preparation 360554-30-9P, preparation  
360554-31-0P, preparation 360554-32-1P 360554-33-2P  
360554-34-3P 360554-35-4P

(polymerizable compns. contg. light-sensitive radical  
polymn. catalysts generating no acids)

IT 9003-77-4P, 2-Ethylhexyl acrylate homopolymer 25053-15-0P, Diallyl  
phthalate homopolymer 25067-05-4P, Glycidyl methacrylate  
homopolymer 25101-18-2P, Diethylene glycol dimethacrylate  
homopolymer 25719-51-1P, 2-Ethylhexyl methacrylate homopolymer  
26022-14-0P, 2-Hydroxyethyl acrylate homopolymer 26426-04-0P,  
Trimethylolpropane trimethacrylate homopolymer 27775-58-2P,  
Poly(pentaerythritol triacrylate) 27813-91-8P, 1,6-Hexanediol  
dimethacrylate homopolymer 28158-16-9P, Ethylene glycol diacrylate  
homopolymer 29323-03-3P, Triallyl trimellitate homopolymer  
36446-02-3P, Poly(trimethylolpropane triacrylate) 57592-66-2P,  
Pentaerythritol tetraacrylate homopolymer 57592-67-3P,  
1,6-Hexanediol diacrylate homopolymer 67653-78-5P,  
Dipentaerythritol hexaacrylate homopolymer 94457-89-3P,  
Polypropylene glycol diacrylate homopolymer 108065-49-2P,  
Pentaerythritol diacrylate homopolymer

(polymerizable compns. contg. light-sensitive radical  
polymn. catalysts generating no acids)

IT 128-04-1, Sodium dimethyldithiocarbamate 148-18-5, Sodium  
diethyldithiocarbamate 1483-72-3, Diphenyliodonium chloride  
3353-89-7, Triphenylsulfonium bromide 4092-82-4, Sodium  
Diisopropyldithiocarbamate 12176-31-7 19028-28-5,  
Bis(p-methylphenyl)iodonium chloride 26068-56-4 32760-80-8  
34881-63-5 55310-46-8, Sodium dibenzylidithiocarbamate  
62051-09-6, Bis(p-tert-butylphenyl)iodonium tetrafluoroborate  
74227-35-3 75482-18-7, Diphenyl(p-phenylthiophenyl)sulfonium  
hexafluorophosphate 80499-27-0 116808-67-4, Diphenyl(p-  
methoxyphenyl)sulfonium triflate 125740-42-3 145612-66-4  
153049-76-4 360554-36-5

(polymerizable compns. contg. light-sensitive radical  
polymn. catalysts generating no acids)

L106 ANSWER 6 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 130:353741 HCA Full-text

TI Photocurable paint composition for road markings

IN Nakamura, Kenichi; Kamata, Hirotoishi; Koshikawa, Toshio; Sugita,  
Suichi

PA Showa Denko Kabushiki Kaisha, Japan

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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AB A photocurable paint compn. for road markings is disclosed, comprising (A) a compd. having an ethylenically unsatd. group, (B) a filler, (C) a cationic dye represented by formula (1): D+A- (wherein D+ represents a cation having an absorption max. wavelength in the wavelength region of from 400 to 1,200 nm, and A- represents an optional anion), (D) a quaternary org. borate-type sensitizer represented by formula (2): R1R2R3R4B-Z+(wherein R1, R2, R3 and R4 each independently represents an alkyl group, an aryl group, an aralkyl group, an alkenyl group, an alkynyl group, a silyl group, a heterocyclic group or a halogen atom, and Z+ represents an optional cation), (E) an UV radical polymn. initiator capable of generating a radical upon absorption of light at a wavelength of 400 nm or less, and, optionally, (F) glass beads. This compn. provides thick coatings that are photocurable in a short time and have good abrasion resistance. A typical compn. contained 5:2:1:2 Ripoxy SP-1529 (bisphenol A epoxy resin acrylate)-tripropylene glycol diacrylate-EB754 (70:30 linear acrylic oligomer-1,6-hexanediol diacrylate mixt.)-isobornyl acrylate mixt. 100, Taipaque CR-58 (rutile) 30, Escalon 100 (CaCO3) 100, GB-402T (glass beads) 100, Aerosil 200 3, 0.7:10.0:30:10:49.3 cationic dye I-tetrabutylammonium butyltri(4-tert-butylphenyl)borate-Irgacure 184 (1-hydroxycyclohexyl Ph ketone)-Lucirin TPO (2,4,6- trimethylbenzoyldiphenylphosphine oxide)-N-methyl-2-pyrrolidone soln. 7 parts.

IT 66003-78-9, Triphenylsulfonium triflate  
(photopolymn. accelerator; photocurable paint compn.  
for road markings)

RN 66003-78-9 HCA

CN Sulfonium, triphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA  
INDEX NAME)

CM 1

CRN 37181-39-8

CMF C F3 O3 S



CM 2

CRN 18393-55-0  
CMF C18 H15 S



- IC ICM C09D005-00  
ICS C08F002-50
- CC 42-10 (Coatings, Inks, and Related Products)
- ST photocurable road marking cationic dye borate sensitizer;  
methylbenzoyldiphenylphosphine oxide photoinitiator road marking;  
hydroxycyclohexyl phenyl ketone photoinitiator road marking; indole  
styryl dye photocurable road marking; glass bead  
photocurable road marking; calcium carbonate filler  
photocurable road marking; rutile filler  
photocurable road marking; hexanediol diacrylate  
photocurable road marking; tripropylene glycol diacrylate  
photocurable road marking; bisphenol A epoxy acrylate  
photocurable road marking; cure rate enhanced road  
marking
- IT Glass beads  
(GB-402T, filler; photocurable paint compn. for road  
markings)
- IT Epoxy resins, uses  
Polyurethanes, uses  
(acrylic, cured paint; photocurable paint  
compn. for road markings)
- IT Dyes  
(cationic, photocurability-enhancing dye;  
photocurable paint compn. for road markings)
- IT Onium compounds  
(iodonium, diaryl, photopolymn. accelerator; photocurable  
paint compn. for road markings)
- IT Crosslinking catalysts  
(photochem.; photocurable paint compn. for road  
markings)
- IT Cyanine dyes  
(photocurability-enhancing dye; photocurable  
paint compn. for road markings)
- IT Marking  
Roads  
(photocurable paint compn. for road markings)
- IT Coating materials  
(photocurable; photocurable paint compn. for

road markings)

IT Borates  
(photosensitizer; photocurable paint compn. for road markings)

IT Sulfonium compounds  
(triaryl, photopolymn. accelerator; photocurable paint compn. for road markings)

IT Dyes  
(xanthene, photocurability-enhancing dye; photocurable paint compn. for road markings)

IT 125004-26-4, Tipaque A 220  
(anatase form, filler; photocurable paint compn. for road markings)

IT 13048-33-4DP, 1,6-Hexanediol diacrylate, epoxy acrylate polymers  
224628-00-6P 224785-37-9P 224785-38-0P 224785-39-1P  
224785-40-4P 224785-41-5P  
(cured paint; photocurable paint compn. for road markings)

IT 471-34-1, Eskalon 100, uses  
(filler; photocurable paint compn. for road markings)

IT 3648-36-0 6441-82-3 115449-80-4 141714-54-7 193146-98-4  
(photocurability-enhancing dye; photocurable paint compn. for road markings)

IT 66003-76-7, Diphenyliodonium triflate 66003-78-9,  
Triphenylsulfonium triflate  
(photopolymn. accelerator; photocurable paint compn. for road markings)

IT 947-19-3, Irgacure 184 7473-98-5, Darocur 1173 24650-42-8,  
Irgacure 651 75980-60-8, Lucirin TPO 184649-96-5, Irgacure 1800  
(photopolymn. initiator; photocurable paint compn. for road markings)

IT 120307-06-4, Tetrabutylammonium butyltriphenylborate 189947-86-2,  
Tetrabutylammonium butyltris(4-tert-butylphenyl)borate 219125-19-6  
(photosensitizer; photocurable paint compn. for road markings)

IT 13463-67-7, Tipaque CR 58, uses  
(rutile form, filler; photocurable paint compn. for road markings)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L106 ANSWER 7 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 130:238249 HCA Full-text

TI Photosensitive epoxy resin compositions and their use in dielectric films and multilayer circuit boards

IN Narahara, Masatoshi; Kawamoto, Mineo; Suwa, Tokihito; Suzuki, Masao; Amau, Satoru; Takahashi, Akio; Fukai, Hiroyuki; Yokota, Mitsuo;

Kobayashi, Shiro; Miyazaki, Masashi  
 PA Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 11049847	A	19990223	JP 1998-130924	199805 14
				<--	
	US 6190834	B1	20010220	US 1998-73645	199805 06
				<--	

PRAI JP 1997-125674 A 19970515 <--  
 JP 1997-148051 A 19970605 <--

AB Title compns. comprise a first epoxy resin, a second epoxy resin which has side chains contg. both N-substituted carbamate group and radically polymerizable unsatd. bond, and, optionally, a third resin contg. phenolic hydroxy group. The compns. also contains photo-sensitive radical polymn. initiators, onium salts as photo-sensitive acid generators, and optionally rubber components. The compns. are suitable for multilayer circuit boards with via holes and are used in making semiconductor devices.

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate (SP 70; photosensitive epoxy resin compns. and their use in dielec. films and multilayer circuit boards)

RN 57840-38-7 HCA

CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S







OS MARPAT 130:25461  
 AB Title compns. with high photosensitivity, useful for high-speed photoimaging, printing inks, coatings, etc., comprise compds. contg. radical-polymerizable unsatd. groups, metal-arene complexes, and arom. sulfonium salts. Thus, a compn. contg. dipentaerythritol polyacrylate, Ph glycidyl ether acrylate, Fe-arene complex, and Ph3S.Br was applied on a polyester sheet and could be hardened with photo-irradn. energy of 970 erg-cm-2 at 650 nm.  
 IT 437-13-8, Triphenyl sulfonium tetrafluoroborate 3353-89-7, Triphenyl sulfonium bromide 4270-70-6, Triphenyl sulfonium chloride 57835-99-1, Triphenyl sulfonium hexafluorophosphate 57840-38-7, Triphenyl sulfonium hexafluoroantimonate (photocurable compns. contg. metal-arene complexes and arom. sulfonium salts)  
 RN 437-13-8 HCA  
 CN Sulfonium, triphenyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S



CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 3353-89-7 HCA

CN Sulfonium, triphenyl-, bromide (1:1) (CA INDEX NAME)



RN 4270-70-6 HCA  
CN Sulfonium, triphenyl-, chloride (1:1) (CA INDEX NAME)



RN 57835-99-1 HCA  
CN Sulfonium, triphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

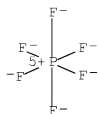


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



RN 57840-38-7 HCA  
 CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA  
 INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

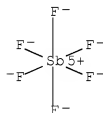


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM C08F002-48  
 ICS C08F002-44; G03F007-029  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 42, 67, 74

ST radical polymerizable compd photocurable  
 compn photosensitivity; metal arene complex photopolymn initiator;  
 coating photocurable compn photosensitivity; printing ink  
 photocurable compn photosensitivity; photoimaging  
 photocurable compn photosensitivity; arom sulfonium salt  
 photopolymn initiator; photopolym initiator photocurable  
 compn photosensitivity; dipentaerythritol polyacrylate  
 photocurable compn photosensitivity; phenyl glycidyl ether  
 acrylate photocurable compn; triphenyl sulfonium bromide  
 catalyst photocurable compn; iron arene complex catalyst  
 photocurable compn; catalyst arene complex sulfonium salt  
 photocurable

IT Sulfonium compounds  
 Sulfonium compounds  
 (arene; photocurable compns. contg. metal-arene  
 complexes and arom. sulfonium salts)

IT Aromatic hydrocarbons, uses  
 (metal complexes; photocurable compns. contg.  
 metal-arene complexes and arom. sulfonium salts)

IT Photoimaging materials  
 (photocurable compns. contg. metal-arene complexes and  
 arom. sulfonium salts)

IT Coating materials  
 (photocurable; photocurable compns. contg.  
 metal-arene complexes and arom. sulfonium salts)

IT Polymerization catalysts  
 (photopolymn.; photocurable compns. contg. metal-arene  
 complexes and arom. sulfonium salts)

IT Inks  
 Inks  
 (printing, photocurable; photocurable compns.  
 contg. metal-arene complexes and arom. sulfonium salts)

IT Aromatic compounds  
 Aromatic compounds  
 (sulfonium; photocurable compns. contg. metal-arene  
 complexes and arom. sulfonium salts)

IT 437-13-8, Triphenyl sulfonium tetrafluoroborate  
 3353-89-7, Triphenyl sulfonium bromide 4270-70-6,  
 Triphenyl sulfonium chloride 7439-89-6D, Iron, arene complex, uses  
 57835-99-1, Triphenyl sulfonium hexafluorophosphate  
 57840-38-7, Triphenyl sulfonium hexafluoroantimonate  
 (photocurable compns. contg. metal-arene complexes and  
 arom. sulfonium salts)

IT 126-58-9D, Dipentaerythritol, polyacrylate 16969-10-1  
 (photocurable compns. contg. metal-arene complexes and  
 arom. sulfonium salts)

L106 ANSWER 9 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 128:76169 HCA Full-text

TI Radically polymerizable compositions  
and their cured products

IN Toba, Yasumasa

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 35 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 09316117	A	19971209	JP 1996-139823	199606 03

PRAI JP 1996-139823 19960603 <--

OS MARPAT 128:76169

AB The compns. contain (a) polymn. initiators of onium borate complexes made of onium cations and (BYmZn)- (Y = F, Cl; Z = Ph substituted by  $\geq 2$  groups selected from F, CN, NO<sub>2</sub>, and CF<sub>3</sub>; m = 0-3; n = 1-4; m + n = 4) and (b) radically polymerizable compds. The polymn. initiators have good soly. in org. materials and resins and generate acids (byproducts) in compds. during polymn., which are removed by heating. The cured products of the compns. are useful for molding resins, casting resins, sealants, and resists, etc. Thus, a compn. prepd. from 3 parts dimethylphenacylsulfonium tetrakis(pentafluorophenyl)borate (polymn. initiators) and 100 parts pentaerythritol triacrylate was applied on an Al plate and UV-irradiated to give a cured membrane without tackiness, which was heated at 150° to give an acid-free compn.

IT 153760-74-8

(polymn. initiators; radical  
polymerizable compns. contg. generated acid-removable  
polymn. initiators)

RN 153760-74-8 HCA

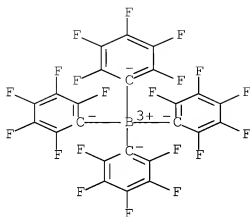
CN Sulfonium, triphenyl-, tetrakis(2,3,4,5,6-pentafluorophenyl)borate(1-  
) (1:1) (CA INDEX NAME)

CM 1

CRN 47855-94-7

CMF C24 B F20

CCI CCS



CM 2

CRN 18393-55-0

CMF C18 H15 S



- IC ICM C08F004-52  
ICS C08F002-46; C08F020-28
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 42
- ST radical polymn cured product byproduct  
free; sulfonium borate initiator erythritol acrylate photopolymn
- IT Coating materials  
(UV-curable; radical polymerizable  
compns. contg. generated acid-removable polymn. initiators for)
- IT Borates  
(complexes, polymn. initiators; radical  
polymerizable compns. contg. generated acid-removable  
polymn. initiators)
- IT Polymerization catalysts  
(radical; radical polymerizable  
compns. contg. generated acid-removable polymn. initiators)
- IT 153606-14-5, Diphenyliodonium tetrakis(pentafluorophenyl)borate  
153760-74-8 181120-29-6 193957-53-8 193957-56-1  
193957-57-2 193957-58-3 193957-59-4 194293-43-1 194352-69-7

194352-70-0 194352-77-7 194470-21-8 194470-23-0 194470-24-1  
 194473-11-5 194473-66-0 194474-32-3 194479-54-4 194479-56-6  
 194479-70-4 194479-97-5 195517-23-8 195620-34-9 197174-96-2,  
 N-Benzylthiazolium tetrakis(pentafluorophenyl)borate 197174-99-5,  
 N-(p-Cyanobenzyl)thiazolium tetrakis(pentafluorophenyl)borate  
 197175-94-3, 2-Mercapto-3-phenacylthiazolium  
 tetrakis(pentafluorophenyl)borate 198641-10-0 198641-11-1  
 198641-12-2 198641-13-3 198641-15-5 198641-16-6 198641-18-8  
 198641-20-2 198641-22-4 198641-23-5 198641-24-6 198641-28-0  
 198641-29-1 198641-31-5 198641-33-7 198641-35-9 198641-37-1  
 198641-39-3 198641-40-6 198641-41-7 200573-03-1 200573-19-9  
 200573-20-2 200573-22-4 200573-23-5 200573-24-6 200573-26-8  
 200573-27-9

(polymn. initiators; radical  
 polymerizable compns. contg. generated acid-removable  
 polymn. initiators)

II 9003-77-4P, 2-Ethylhexyl acrylate homopolymer  
 25053-15-0P, Diallyl phthalate homopolymer 25067-05-4P,  
 Glycidyl methacrylate homopolymer 25101-18-2P,  
 Diethylene glycol dimethacrylate homopolymer  
 25719-51-1P, 2-Ethylhexyl methacrylate homopolymer  
 26022-14-0P, 2-Hydroxyethyl acrylate polymer  
 26426-04-0P, Trimethylolpropane trimethacrylate homopolymer  
 27775-58-2P, Pentaerythritol triacrylate homopolymer  
 27813-91-8P, 1,6-Hexanediol dimethacrylate homopolymer  
 28158-16-9P, Ethylene glycol diacrylate homopolymer  
 29323-03-3P 36446-02-3P, Trimethylolpropane triacrylate  
 homopolymer 57592-66-2P, Pentaerythritol tetraacrylate  
 homopolymer 57592-67-3P, 1,6-Hexanediol diacrylate  
 homopolymer 67653-78-5P, Dipentaerythritol hexaacrylate  
 homopolymer 94457-89-3P, Polypropylene glycol diacrylate  
 homopolymer 108065-49-2P

(radical polymerizable compns. contg.  
 generated acid-removable polymn. initiators)

II 65-61-2, Acridine orange 90-93-7, 4,4'-Diethylaminobenzophenone  
 120-12-7, Anthracene, uses 448-61-3, 2,4,6-Triphenylpyrylium  
 tetrafluoroborate 492-22-8, Thioxanthone 917-23-7,  
 Tetraphenylporphyrin 1582-78-1 6285-94-5 11121-48-5, Rose  
 Bengal 17372-87-1, Eosin Y 25470-94-4 38215-36-0,  
 3-(2-Benzothiazolyl)-7-(diethylamino)coumarin 63226-13-1,  
 3,3'-Carbonyl bis[7-(diethylamino)coumarin] 200573-28-0  
 (sensitizers; radical polymerizable compns.  
 contg. generated acid-removable polymn. initiators)

L106 ANSWER 10 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 127:332454 HCA Full-text

TI Resin compositions for use in stereolithographic modeling



and method for making the models  
 IN Okawa, Kazuo; Chikaoka, Satoyuki  
 PA Asahi Denka Kogyo K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 09268205	A	19971014	JP 1996-99536	199603 29

PRAI JP 1996-99536 19960329 <--

OS MARPAT 127:332454

AB The compns. giving models with low mold shrinkage while requiring no post treatment are obtained from (A) cationic polymerizable compds., (B) radiation-sensitive cationic polymn. initiators, and optionally, (C) radical-polymerizable monomers, (D) radical initiators, and (E) fillers where the B-type initiators are selected from arylsulfonium salts [R1R2SXSCOR3]+A- (R1,2,3 = Ph groups optionally substituted with halogen, hydrocarbyl and alkoxy groups; X = p-phenylene; A = counter anions based on halides of As, B, P or Sb) for enhancing cationic curability. The models are manufd. by irradiating with energy beams, e.g., laser beams, as usual. Thus, a title compn. was obtained from (A) 3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate 75 and 1,4-butanediol diglycidyl ether 25 and (B) 4-(4- benzoylphenylthio)phenyldiphenylsulfonium hexafluoroantimonate 6 parts.

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
 (cationic polymn. initiators; resin compns. for use in  
 stereolithog. modeling and method for making models)

RN 57840-38-7 HCA

CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA  
 INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

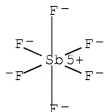


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



- IC ICM C08F004-12  
ICS B29C067-00; C08F004-00; C08F004-06; C08F299-02; C08G059-18;  
C08G059-68; G03F007-029
- CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 74
- IT Epoxy resins, uses  
(stereolithog. modeling compns.; cationic and optionally  
radical-polymer. compns. contg. arylsulfonium  
salts with good curability for modeling)
- IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
89452-37-9, 4,4'-Bis[diphenylsulfonio]phenylsulfide  
bis(hexafluoroantimonate) 164008-89-3, 4-(4-Benzoylphenylthio)phenylbis(4-fluorophenyl)sulfonium  
hexafluoroantimonate 164008-99-5, 2,6-Bis[4-(4-(bis(4-methylphenyl)sulfonio)phenylthio)benzoyl]naphthalene  
bis(hexafluoroantimonate) 197796-26-2, 4-(4-Benzoylphenylthio)phenyldiphenylsulfonium hexafluoroantimonate  
197796-31-9, 4-(4-Benzoylphenylthio)phenylbis(4-hydroxyethyloxyphenyl)sulfonium hexafluoroantimonate 197796-36-4,  
4-(4-Benzoylphenylthio)phenylbis(4-chlorophenyl)sulfonium  
hexafluorophosphate 197796-44-4, 4-[4-(1-Naphthoyl)phenylthio]phenyldiphenylsulfonium hexafluoroantimonate  
197796-47-7, 4-[4-(2-Naphthoyl)phenylthio]phenyldiphenylsulfonium  
hexafluoroantimonate  
(cationic polymer. initiators; resin compns. for use in  
stereolithog. modeling and method for making models)
- IT 57214-19-4, 1,4-Butanediol diglycidyl ether-3,4-

epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate copolymer  
 197796-19-3, Bisphenol A diglycidyl ether-dipentaerythritol  
 hexaacrylate-3,4-epoxycyclohexylmethyl 3,4-  
 epoxycyclohexanecarboxylate-trimethylolpropane triacrylate copolymer  
 197796-21-7, 1,4-Butanediol diglycidyl ether-di(3,4-  
 epoxycyclohexylmethyl) adipate-dipentaerythritol  
 hexaacrylate-trimethylolpropane triacrylate copolymer 197796-23-9,  
 1,4-Butanediol diglycidyl ether-di(3,4-epoxycyclohexylmethyl)  
 adipate-dipentaerythritol hexaacrylate copolymer  
 (stereolithog. modeling compns.; cationic and optionally  
 radical-polymer. compns. contg. arylsulfonium  
 salts with good curability for modeling)

L106 ANSWER 11 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 119:96517 HCA [Full-text](#)

TI Synergistically crosslinkable compositions for use in the  
 optical carving of resin cast molds with good dimensional stability  
 and reduced brittleness

IN Okawa, Kazuo; Saito, Seiichi

PA Asahi Denka Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
PI	JP 05005004	A	19930114	JP 1990-408220	199012 27

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JP 2898761 B2 19990602

PRAI JP 1990-408220 19901227 <--

AB The title compns. are formulated from (a) radiation-curable and  
 cationically polymerizable org. compds., (b) initiators for the a,  
 (c) radiation- and radically-polymerizable compds., and (d)  
 initiators for the c wherein the b comprise onium salts and  
 metallocene complexes for improved curing. A title compn.  
 comprising, as (a) 3,4-epoxycyclohexylmethyl 3',4'-  
 epoxycyclohexanecarboxylate 85, as (b) bis[4-  
 (diphenylsulfonio)phenyl] sulfidobisdihexafluoroantimonate 5, and  
 (η6-isopropylbenzene) (η5-cyclopentadienyl)iron (III) hexafluoro  
 phosphate 5, as (c) dipentaerythritol hexaacrylate 15, and as (d)  
 benzophenone 5 parts, was transparent to laser and could be carved  
 into a mold with excellent dimensional precision.

IT 57340-38-7, Triphenylsulfonium hexafluoroantimonate

(initiators, synergistic mixt. of, for resin blends  
curable by radiation-cationic/radical  
polymn., for optical carving of molds)

RN 57840-38-7 HCA

CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA  
INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

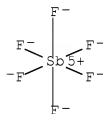


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM C08F002-50

ICS C08F004-42; G03F007-029; G03F007-038

CC 35-8 (Chemistry of Synthetic High Polymers)

ST optical carving epoxy curing system; synergistic  
crosslinking agent cationic radiochem; cast mold forming photochem  
radiochem polymn

IT Polymers, uses

(addn., blends with radiation- and cationically curable  
resins, for forming cast mold via optical carving, synergistic  
curing systems for)

IT Epoxy resins, uses

- (blends with radiation- and radical-curable resins, for forming cast molds via optical carving, synergistic curing systems for)
- IT Plastics, molded
  - (cast, for resin mold formed via optical method, radiation-cationic/radical polymn. compns. for, synergistic initiator systems for)
- IT Onium compounds
  - (initiators, synergistic mixt. of, for resin blends curable by radiation-cationic/radical polymn., for optical carving of molds)
- IT Sandwich compounds
  - (initiators, synergistic mixts. of, for resin blends curable by radiation-cationic/radical polymn., for optical carving of molds)
- IT Molds (forms)
  - (resin-based, optically-carvable, radiation-cationic/radical polymn. compns. for, synergistic initiator systems for)
- IT Polymerization catalysts
  - (cationic, photochem., synergistic mixts. of, for resin blends curable by radiation-cationic/radical polymn., for optical carving of molds)
- IT Polymerization catalysts
  - (radical, photochem., synergistic mixt. of, for resin blends curable by radiation-cationic/radical polymn., for optical carving of molds)
- IT 67653-78-5, Dipentaerythritol hexaacrylate polymer 106980-37-4
  - (blends with radiation and cationically curable resins, for forming cast mold via optical carving, synergistic curing systems for)
- IT 25085-98-7 53895-45-7 57214-19-4 57592-66-2, Pentaerythritol tetraacrylate polymer 128810-00-4 133736-16-0
  - (blends with radiation- and radical-curable resins, for forming cast mold via optical carving, synergistic curing systems for)
- IT 119-61-9, Benzophenone, uses 6175-45-7, 2,2-Diethoxyacetophenone 24650-42-8, Benzil dimethyl ketal 32760-80-8 33435-42-6 57840-36-7, Triphenylsulfonium hexafluoroantimonate 59183-95-8 89452-37-9
  - (initiators, synergistic mixt. of, for resin blends curable by radiation-cationic/radical polymn., for optical carving of molds)

IN Okawa, Kazuo; Saito, Seiichi  
 PA Asahi Denka Kogyo K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 04261421	A	19920917	JP 1991-21842	199102 15

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JP 3197907 B2 20010813  
 PRAI JP 1991-21842 19910215 <--

AB The title compns. comprise arom. epoxide, alicyclic epoxy, and/or org. group-contg. epoxy resins and photoinitiators, and optionally (meth)acrylate and radical polymn. initiators. Thus, a molding prepd. by photoirradiating bisphenol A diglycidyl ether 45, 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate 40, vinylcyclohexane monooxide 15, and bis[4-(diphenylsulfonium)phenyl]sulfide bis(dihexafluoro) antimonate 2 parts under 80 W/cm for 3 min showed deep curing 25mm and dimensional accuracy 1.1%.

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate (photoinitiators, for epoxy resins, for dimensional accurate moldings)

RN 57840-38-7 HCA

CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

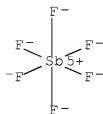
CMF C18 H15 S



CM 2

CRN 17111-95-4

CMF F6 Sb  
CCI CCS



- IC ICM C08G059-18  
ICS C08G059-20; C08G059-70; C08L063-00
- CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 36
- ST photocuring epoxycyclohexylmethylepoxycyclohexanecarboxyl  
copolymer; vinylcyclohexane monoxide epoxy photocuring  
molding
- IT Molding of plastics and rubbers  
(of photocurable epoxy resins, for dimensional  
accuracy)
- IT Epoxy resins, uses  
(photocurable moldings, dimensional accuracy with deep  
curing)
- IT Polymerization  
(photochem., of epoxy resins, dimensional accuracy with deep  
curing)
- IT 2238-07-5D, Glycidyl ether, C12-13 alc. deriv., polymers  
13410-58-7D, Hydrogenated bisphenol A diglycidyl ether, polymers  
16096-31-4D, 1,6-Hexanediol diglycidyl ether, polymers  
39817-09-9D, Bisphenol F diglycidyl ether, polymers 57214-19-4D,  
polymers 128738-65-8 147244-86-8 147244-88-0  
(photocurable moldings, dimensional accuracy with deep  
curing)
- IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
89452-37-9  
(photoinitiators, for epoxy resins, for dimensional accurate  
moldings)
- L106 ANSWER 13 OF 22 HCA COPYRIGHT 2008 ACS on STN
- AN 116:206977 HCA [Full-text](#)
- TI Photochemically hardenable and structure-forming photopolymer  
mixture for production of anion-sensitive matrix membranes  
for potentiometric sensors

IN Dumschat, Christa; Froemer, Radim; Rautschek, Holger; Mueller,  
 Helmut; Timpe, Hans Joachim  
 PA Technische Hochschule "Carl Schorlemmer" Leuna-Merseburg, Germany  
 SO Ger. (East), 4 pp.  
 CODEN: GEXXA8  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
PI	DD 292555	A5	19910801	DD 1990-338575	199003 12
				<--	
	DE 4018554	A1	19910919	DE 1990-4018554	199006 09

PRAI DD 1990-338575 A 19900312 <--

AB This mixt. can be processed by a photolithog. method into a structured anion-sensitive matrix membrane esp. for a NO3- detn. using potentiometric sensors, and comprises a radical polymerizable polymer or prepolymer, the active components of which are a nitro group-contg. plasticizer and an onium salt of Group V, VI or VII as the photoinitiator or as a constituent of a photoinitiator system.

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
 (in prodn. of anion-sensitive matrix membrane for potentiometric sensors, mixt. involving)

RN 57840-38-7 HCA

CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S



CM 2



CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM G03F007-029

CC 79-2 (Inorganic Analytical Chemistry)

Section cross-reference(s): 74

IT Polymers, uses

(photocurable, in prepn. of anion-sensitive matrix  
membrane for potentiometric sensors, mixt. involving)

IT 84-11-7, Phenanthrenequinone 98-95-3D, alkoxy derivs. 1565-94-2

4687-94-9, Bisphenol A diglycidyl ether diacrylate 13048-33-4

37682-29-4 49562-76-7 57840-38-7, Triphenylsulfonium

hexafluoroantimonate 67285-53-4 103762-59-0

(in prodn. of anion-sensitive matrix membrane for potentiometric  
sensors, mixt. involving)

L106 ANSWER 14 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 113:193007 HCA Full-text

OREF 113:32675a,32678a

TI Energy beam-curable epoxy resin compositions for  
computer aided design photopolymerization molding

IN Okawa, Kazuo; Saito, Seiichi

PA Asahi Denka Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 02075617	A	19900315	JP 1988-229380	

198809

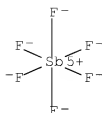
13

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JP 2590230 B2 19970312  
 PRAI JP 1988-229380 19880913 <--  
 AB The title compns., useful for models of casting, tracer controlled cutting, etc., contain energy beam-curable cationically polymerizable materials having  $\geq 40\%$  alicyclic epoxy resins and  $\geq 20\%$  aliph. or arom. epoxy resins (contg.  $\geq 3$ epoxide groups), energy beam-sensitive cationic polymn. initiators, energy beam-curable radically polymerizable materials, and energy beam-sensitive radical polymn. initiators. Thus, a compn. comprising 3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate 65, sorbitol tetraglycidyl ether 20, dipentaerythritol hexaacrylate 15, bis[4-(diphenylsulfonyl)phenyl] sulfide bishexafluoroantimonate 3, and benzophenone 1 part was polymn.-molded in a computer aided design molding system using He-Cd laser to give a cone-shaped molding with good accuracy and mech. strength.  
 IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate (polymn. catalysts, for energy beam-curable epoxy resins, for computer aided design molding, acrylic resins in)  
 RN 57840-38-7 HCA  
 CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA INDEX NAME)  
 CM 1  
 CRN 18393-55-0  
 CMF C18 H15 S



CM 2  
 CRN 17111-95-4  
 CMF F6 Sb  
 CCI CCS



- IC ICM C08G059-00  
ICS C08G059-32
- CC 38-3 (Plastics Fabrication and Uses)
- ST energy beam curable epoxy resin; computer aided design molding acrylic; laser curable acrylic epoxy resin
- IT Epoxy resins, preparation  
(prepn. of, energy beam-curable, for computer aided design molding)
- IT Phenolic resins, uses and miscellaneous  
(epoxy, novolak, energy beam-cured, contg. acrylic resins, for computer aided design molding)
- IT Epoxy resins, uses and miscellaneous  
(phenolic, novolak, energy beam-cured, contg. acrylic resins, for computer aided design molding)
- IT 1125-88-8  
(polymn. catalysts, for energy beam-curable acrylic resins, for computer aided design molding, epoxy resins in)
- IT 119-61-9, Benzophenone, uses and miscellaneous 57840-38-7, Triphenylsulfonium hexafluoroantimonate 89452-37-9  
(polymn. catalysts, for energy beam-curable epoxy resins, for computer aided design molding, acrylic resins in)
- IT 6175-45-7, 2,2-Diethoxyacetophenone  
(polymn. catalysts, for energy beam-cured acrylic resins, for computer aided design molding, epoxy resins in)
- IT 1675-54-3DP, reaction products with phenol novolak epoxy resins and epoxy compds. 2386-87-0DP, reaction products with phenol novolak epoxy resins and epoxy compds. 28061-03-2DP, reaction products with phenol novolak epoxy resins and epoxy compds. 128809-99-4P, 1,4-Butanediol diglycidyl ether-3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate-trimethylolpropane triglycidyl ether copolymer 130269-34-0P, 3,4-Epoxy cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate-sorbitol tetraglycidyl ether copolymer 130269-35-1P, 1,4-Butanediol diglycidyl ether-3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate-sorbitol tetraglycidyl ether copolymer  
(prepn. of, energy beam-cured, contg. acrylic polymers,

for computer aided design molding)  
 IT 67653-78-5P 128809-97-2P 128810-00-4P, Trimethylolpropane  
 triacrylate-dipentaerythritol hexaacrylate copolymer 128810-01-5P  
 (prepn. of, energy beam-cured, contg. epoxy resins, for  
 computer aided design molding)

L106 ANSWER 15 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 113:173474 HCA Full-text

OREF 113:29425a,29428a

TI Radiation-curable optical molding resin  
 compositions

IN Okawa, Kazuo; Saito, Seiichi  
 PA Asahi Denka Kogyo K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 02075618	A	19900315	JP 1988-229379	198809 13

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JP 07103218 B 19951108  
 PRAI JP 1988-229379 19880913 <--

AB The comps., useful for making models for casting molds and  
 simulation in numerically controlled cutting, comprise radiation-  
 curable cationically polymerizable org. compds. contg. ≥40% alicyclic  
 epoxy resins, radiation-sensitive cationic polymn. initiators,  
 radiation-curable radically polymerizable org. compds. contg. ≥50%  
 compds. with ≥3 double bonds, radiation-sensitive radical polymn.  
 initiators, and OH-contg. polyesters. Thus, a mixt. of 3,4-  
 epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate (I) 65, 1,4-  
 butanediol diglycidyl ether (II) 20, bis[4-(diphenylsulfonio)phenyl]  
 sulfide bis(hexafluoroantimonate) 3, dipentaerythritol hexaacrylate  
 15, benzophenone 1, and trimethylolpropane-initiated poly-ε-  
 caprolactone 15 parts formed a hollow cone of base diam. 12 mm,  
 height 15 mm, and wall thickness 0.5 mm with 1.3% accuracy in 35 min  
 under application of numerical control and a He-Cd laser, while a  
 control contg. I, II, bisphenol A diglycidyl ether, and  
 triphenylsulfonium hexafluoroantimonate took 120 min with 6.8%  
 accuracy.

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
 (cationic polymn. photoinitiator, in optical molding resin  
 comps.)

RN 57840-38-7 HCA  
 CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA  
 INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

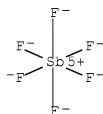


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM C08G059-18  
 ICS C08F299-04; C08G063-82; C08G065-06; C08G075-06; C08L033-06  
 CC 37-6 (Plastics Manufacture and Processing)  
 ST radiation curable optical molding resin; alicyclic epoxy  
 optical molding resin; mold model optical molding resin; simulation  
 numerical control cutting resin  
 IT Polymerization catalysts  
 (cationic, photochem., optical molding resin compns.  
 contg. radical photoinitiators and)  
 IT Polymerization catalysts  
 (photochem., radical, optical molding resin  
 compns. contg. cationic photoinitiators and)  
 IT 129845-19-8P 129845-20-1P 129846-64-6P  
 (acrylic polymer blends, prepn. of, simultaneously radiation-

cured, with high accuracy, for fabrication of mold models)

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate 89452-37-9 (cationic polymn. photoinitiator, in optical molding resin compns.)

IT 67653-78-5P 128810-00-4P 128810-01-5P (epoxy resin blends, prepn. of, simultaneously radiation-cured, with high accuracy, for fabrication of mold models)

IT 129846-35-1P (prepn. of, radiation-cured, with high accuracy, for fabrication of mold models)

IT 119-61-9, Benzophenone, uses and miscellaneous 6175-45-7, 2,2-Diethoxyacetophenone 24650-42-8, Benzil dimethyl ketal (radical polymn. photoinitiator, in optical molding resin compns.)

L106 ANSWER 16 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 113:99075 HCA Full-text

OREF 113:16745a,16748a

TI Energy beam-curable epoxy resin and acrylic resin compositions for computer aided design photopolymerization molding

IN Okawa, Kazuo; Saito, Seiichi

PA Asahi Denka Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	
PI	JP 02075621	A	19900315	JP 1988-229381	

198809  
13

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JP 2632961 B2 19970723  
PRAI JP 1988-229381 19880913 <--

AB The title compns., useful for models of casting, tracer controlled cutting, etc., contain energy beam-curable cationically polymerizable org. materials, energy beam-sensitive cationic polymn. initiators, energy beam-curable radically polymerizable org. materials having ≥50% epoxy acrylates contg.2 double bonds, and energy beam-sensitive radical polymn. initiators. Thus, a compn. comprising 3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate 65, 1,4-

butanediol diglycidyl ether 20, bisphenol A epoxy acrylate 15, bis[4-(diphenylsulfonyl)phenyl] sulfide bishexafluoroantimonate 3, and benzophenone 1 part was polymn.-molded in computer aided design molding system using He-Cd laser to give a cone-shaped molding with accuracy and mech. strength.

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
(polymn. catalysts, for energy beam-curable epoxy  
resins, for computer aided design molding, acrylic resins in)  
RN 57840-38-7 HCA  
CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA  
INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

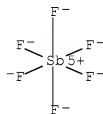


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM C08G059-32  
ICS C08F299-00; C08G059-00; C08G063-82; C08G075-06  
CC 38-3 (Plastics Fabrication and Uses)  
ST energy beam curable epoxy resin; computer aided design  
molding acrylic; laser curable acrylic epoxy resin  
IT Epoxy resins, preparation

(prepn. of, energy beam-cured, contg. acrylic resins,  
for computer aided design molding)

IT 119-61-9, Benzophenone, uses and miscellaneous 1125-88-8  
6175-45-7, 2,2-Diethoxyacetophenone  
(polymn. catalysts, for energy beam-curable acrylic  
resins, for computer aided design molding, epoxy resins in)

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
89452-37-9  
(polymn. catalysts, for energy beam-curable epoxy  
resins, for computer aided design molding, acrylic resins in)

IT 57214-19-4P, 3,4-Epoxy cyclohexylmethyl 3,4-  
epoxycyclohexanecarboxylate-1,4-butanediol diglycidyl ether  
copolymer 128738-65-8P, Bisphenol A diglycidyl  
ether-3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanetriacrylate-  
vinylcyclohexene oxide copolymer  
(prepn. of, energy beam-curable, contg. acrylic resins,  
for computer aided design molding)

IT 80164-51-8P 119846-20-7P 128809-97-2P, Bisphenol A ethylene  
oxide adduct diacrylate-pentaerythritol triacrylate copolmer  
128809-98-3P, Bisphenol A ethylene oxide adduct diacrylate-  
triethylene glycol divinyl ether copolmer  
(prepn. of, energy beam-cured, contg. epoxy resins, for  
computer aided design molding)

L106 ANSWER 17 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 112:88335 HCA Full-text

OREF 112:14859a,14862a

TI Epoxy resin photoresist composition for electroless  
coating

IN Morikawa, Takao; Muramoto, Hiroo; Tsuda, Hideo; Kawamoto, Mineo;  
Murakami, Kanji

PA Nippon Soda Co., Ltd., Japan; Hitachi, Ltd.

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 01209442	A	19890823	JP 1988-33933	198802 18

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PRAI JP 1988-33933 19880218 <--

AB The title compn. contains an epoxy resin having  $\geq 2$  glycidyl ethers  
linked to an arom. cycle or cyclohexane, (R10)aPO(OR2)b(OR3)c (R1 =



epoxy-contg. org. group; R2 = radical polymerizable function-contg. org. group; R3 = org. group except R1-2; a, b = 1, 2; c = 0, 1; a + b + c = 3), and a photosensitive arom. onium salt. The compn. is useful for manufg. an additive type printed circuit board. Thus, a bisphenol A epoxy resin, a hydrogenated bisphenol A epoxy resin, an adduct of bisphenol A epoxy resin and bisacryloyloxyethyl hydroxyphosphate, tert-butylphenyl glycidyl ether, tripropylene glycol diglycidyl ether, powd. Si oxide, powd. Zr silicate, Phthalocyanine Green, silicone oil, an acrylate ester copolymer, and triphenylsulfonium hexafluoroantimonate were mixed to give the title compn. Then, a laminate was coated with powd. CaCO<sub>3</sub>-contg. PhOH-modified NBR adhesive, heat cured, chromic acid mixt.-roughened, screen-printed with the compn., activated ray-irradiated, and electrolessly coated to give a Cu circuit without abnormal Cu pptn. showing no blister on the resist.

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
(phosphate-modified epoxy resin photoresist contg., with  
resistance against electroless coating, for printed circuit)  
RN 57840-38-7 HCA  
CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA  
INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

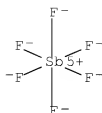


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM G03C001-71  
 ICS C09D003-58; G03C001-00  
 ICA C08G059-40  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76  
 IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
 (phosphate-modified epoxy resin photoresist contg., with resistance against electroless coating, for printed circuit)

L106 ANSWER 18 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 109:150953 HCA Full-text

OREF 109:25111a,25114a

TI Photocurable acrylate polymer compositions for sanding materials

PA Minnesota Mining and Manufacturing Co., USA

SO Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DT Patent

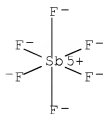
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 63047068	A	19880227	JP 1987-199676	198708 10
				<--	
	US 4751138	A	19880614	US 1986-895315	198608 11
				<--	
	ZA 8704819	A	19890222	ZA 1987-4819	198707 02
				<--	



CMF F6 Sb  
CCI CCS



IC ICM B24D011-00  
ICS C08J005-14

CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 43

ST phenolic resin sandpaper; acrylate copolymer sandpaper; bisphenol A  
copolymer sandpaper; acrylic acid copolymer sandpaper;  
vinylpyrrolidone copolymer sandpaper; photoinitiator curing  
epoxy acrylate; sandpaper epoxy acrylate; free radical initiator  
curing epoxy acrylate

IT Epoxy resins, uses and miscellaneous  
(curing of, free radical and photoinitiators for, for  
sandpaper)

IT Polymerization catalysts  
(ring-opening, free-radical, for epoxy-acrylate  
copolymer, for sandpaper manuf.)

IT 3524-68-3D, polymer with diacryl-modified epoxy resin and  
N-vinylpyrrolidone 92899-80-4 116657-31-9  
(curing of, free radical and photoinitiators for, for  
sandpaper)

IT 116543-32-9 116543-33-0 116543-34-1 116543-37-4 116543-38-5  
116543-39-6 116543-40-9 116543-41-0 116629-25-5 116629-26-6  
116629-83-5 116738-15-9 116743-63-6  
(curing of, free radical and photoinitiators for, in  
sandpaper manuf.)

IT 116543-39-2 116543-36-3 116629-27-7 116629-28-8  
(curing of, free radical and photoinitiators for,  
sanding paper)

IT 5495-84-1 24650-42-8 ~~57840-38-7~~ 58109-40-3  
(initiators, for epoxy-acrylate copolymer, for, sandpaper manuf.)

L106 ANSWER 19 OF 22 HCA COPYRIGHT 2008 ACS on STN  
AN 100:176570 HCA Full-text  
OREF 100:26867a,26870a

TI Photocurable epoxy acrylic compositions  
 IN Lee, George A.; Hickner, Richard A.  
 PA Dow Chemical Co., USA  
 SO U.S., 8 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	US 4428807	A	19840131	US 1978-921011	197806 30

PRAI US 1978-921011 19780630 <--

AB A photocurable resin consists of (A) a partially esterified epoxy ester of a terminally unsatd. monocarboxylic acid and a polyepoxide and (B) a curing system consisting of a free-radical photoinitiator and a radiation-sensitive arom. onium salt of an element of Group Va or VIIa which is capable of inducing the cure of A by releasing a Lewis acid catalyst when exposed to radiant energy. Thus, a mixt. of 0.065 mol bisphenol A diglycidyl ether, 0.033 mol acrylic acid, 0.0313 g hydroquinone, 0.0313 g hydroquinone Me ether, and 13 mg tris(dimethylaminomethyl)phenol in 0.15 mL water was heated 2 h at 90° and 1 h at 110° to give a resin contg. 50% acrylate and 50% epoxy functionality. The resin (0.4843 g) was mixed with dicyclopentadiene acrylate 0.508, diethoxyacetophenone [64131-70-0] 0.0359, and MeCN soln. of p-chlorobenzenediazonium hexafluorophosphate [1582-27-0] 0.0482 g to give a compn. which was spread onto Al panels and cured in three passes under a 200 W/linear in. Hg arc lamp at a rate of 100 ft/min.

IT 57835-99-1

(catalysts, contg. free radical catalysts, for photocuring of acrylated epoxy resin coatings)

RN 57835-99-1 HCA

CN Sulfonium, triphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

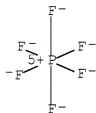


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



IC C08F002-50; C08F004-32

INCL 204159140

CC 42-7 (Coatings, Inks, and Related Products)

ST acrylic epoxy coating photocuring; cationic photoinitiator acrylic epoxy; radical photoinitiator acrylic epoxy; photoinitiator acrylic epoxy coating; onium photoinitiator acrylic epoxy; acetophenone photoinitiator acrylic epoxy

IT Onium compounds  
(catalysts, contg. diethoxyacetophenone, for photocuring of acrylated epoxy resin coatings)

IT Soybean oil  
(epoxidized, polymers with acrylates and epoxy compds., coatings, photocurable, in presence of cationic and free-radical initiators)

IT Polymerization catalysts  
(photochem., radical, diethoxyacetophenone, contg. onium compds., for acrylated epoxy resin coatings)

IT Coating materials  
(photocurable, acrylated epoxy resins, curing of, in presence of free-radical and cationic catalysts)

IT 61358-25-6  
(catalysts, contg. diethoxyacetophenone, for photocuring of acrylated epoxy resin coatings)

IT 1582-27-0 57835-99-1 76012-27-6 89899-77-4  
(catalysts, contg. free radical catalysts, for photocuring of acrylated epoxy resin coatings)

IT 51326-37-5  
(catalysts, contg. onium compds., for photocuring of epoxy acrylic coatings)  
IT 1498-69-7 1499-10-1 6175-45-7  
(catalysts, contg. onium salts, for photochem. curing of acrylated epoxy resin coatings)  
IT 75-21-8D, polymers with acrylates and epoxy compds. 4491-03-6D, polymers with acrylates and epoxy compds. 25085-98-7D, polymers with acrylates and epoxy compds. 48145-04-6D, polymers with acrylates and epoxy compds. 53814-24-7D, polymers with acrylates and epoxy compds. 89788-07-8 89788-08-9 89871-40-9 89871-41-0 89871-42-1 89871-43-2 89871-45-4 89908-00-9 89952-36-3  
(coatings, photocuring of, in presence of cationic and free-radical catalysts)

L106 ANSWER 20 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 99:55080 HCA Full-text

OREF 99:8603a,8606a

TI Formulation of UV-curable paints

AU Su, W. F. A.; Grosset, A. M.; Izzo, C. P.

CS Westinghouse Res. Dev. Cent., Pittsburgh, PA, USA

SO Tech. Pap. - Soc. Manuf. Eng., [Ser.] FC (1982), FC82-304, 14 pp.

CODEN: TSFCDV

DT Report

LA English

AB UV curing of coatings requires only 1/3 of the energy required by curing in gas-fired ovens. Two photoinduced polymers., with radical or cationic mechanisms, were used to formulate UV-curable paints. The spectral output of the radiation source must complement the absorption spectra of the pigments and photoinitiators for max. curing efficiency. One-coat enamels, topcoats, and primers were developed which can be sprayed and cured by UV lamps.

IT 57835-99-1  
(photoinitiators, for UV curable coatings)

RN 57835-99-1 HCA

CN Sulfonium, triphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

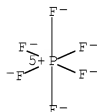


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



CC 42-9 (Coatings, Inks, and Related Products)  
 ST UV curable coating; crosslinking coating photochem  
 IT Crosslinking catalysts  
     (photochem., for UV-curable coatings)  
 IT Coating materials  
     (photocurable, photoinitiators for)  
 IT 25085-98-7 86546-75-0  
     (coatings, UV-curable, photoinitiators for)  
 IT 84-51-5 84-54-8 86-39-5 105-59-9 110-91-8, uses and  
     miscellaneous 134-81-6 10287-53-3 57835-99-1  
     86546-43-2 86546-44-3  
     (photoinitiators, for UV curable coatings)

L106 ANSWER 21 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 99:39315 HCA Full-text

OREF 99:6189a,6192a

TI Epoxy resin compositions for photocurable  
 prepregs

PA Mitsubishi Electric Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese



FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58008723	A	19830118	JP 1981-106775	19810708

&lt;--

JP 62001649 B 19870114  
 PRAI JP 1981-106775 19810708 <--  
 AB Polymer compns. for binding tapes which are crosslinked to a precisely reproducible extent by heating after impregnation, then fully cured after application by exposure to light, comprise epoxy resins 40-70, compds. having  $\geq 2$  unsatd. groups 28-58, thermally activated free-radical catalysts 0.1-5, and photochem. activated Lewis acid-producing catalysts 0.5-5 parts. Thus, a glycidyl methacrylate-modified unsatd. polyester, UE 8200 [78810-41-0] epoxy acrylate, styrene, Epikote 1001 [25068-38-6] and Epikote 828 epoxy resins, MEK peroxide [1338-23-4], and 4,4'-dimethyldiphenyliodonium hexafluorophosphate [60565-88-0] were combined to form an adhesive compn., which was applied to glass fiber tape and heated to 80°, 100°, and then 120° for 30 min (each) to obtain a non-tacky flexible prepreg tape. When wrapped around articles and cured by an 80 W/cm, 2.5 kW high-pressure Hg lamp at 100 mm for 40 s, the hardened tape had excellent mech., elec., and thermal properties and chem. resistance.

IT 57835-99-1  
 (crosslinking catalysts, in epoxy resin compns. for photocurable preregs)

RN 57835-99-1 HCA  
 CN Sulfonium, triphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0  
 CMF C18 H15 S

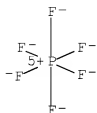


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



IC C08G059-18

ICA C08J005-24

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 35

ST thermal photochem crosslinking epoxy prepreg; UV curable epoxy binding tape

IT Onium compounds

(crosslinking catalysts, in epoxy resin compns. for photocurable prepregs)

IT Lewis acids

(crosslinking catalysts, in photocurable epoxy resin prepregs)

IT Adhesive tapes

(photocuring, unsatd. epoxy resin compns. for)

IT Polyesters, uses and miscellaneous

(thermal crosslinking agents, in epoxy resin compns. for photocurable prepregs)

IT Epoxy resins, uses and miscellaneous

(unsatd. resin blends, for photocurable prepregs)

IT Crosslinking catalysts

(photochem., in unsatd. epoxy resin compns. for photocurable prepregs)

IT Crosslinking catalysts

(radical, in unsatd. epoxy resin compns. for photocurable prepregs)

IT 57835-99-1 58109-40-3 60565-88-0

(crosslinking catalysts, in epoxy resin compns. for photocurable prepregs)

IT 94-36-0, uses and miscellaneous 614-45-9 1338-23-4

(crosslinking catalysts, with photochem. catalysts, in unsatd. epoxy compns. for photocurable prepregs)

IT 109-17-1 15625-89-5 17831-71-9 78810-41-0 86338-98-9

(thermal crosslinking agents, in epoxy resin compns. for  
photocurable prepregs)

IT 25068-38-6

(unsatd. resin blends, for photocurable prepregs)

L106 ANSWER 22 OF 22 HCA COPYRIGHT 2008 ACS on STN

AN 95:221444 HCA Full-text

OREF 95:36947a,36950a

TI Photocurable composition containing a free  
radical curable organic resin and a  
triaryl sulfonium salt

IN Crivello, James V.; Moore, James E.

PA General Electric Co. , USA

SO Can., 17 pp.

CODEN: CAXXA4

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	CA 1106096	A1	19810728	CA 1978-310436	197808 31

<--

PRAI CA 1978-310436 A 19780831 <--

AB Photocurable compns. are cured by UV light in the presence of certain triarylsulfonium salts. Thus, a compn. comprising 67% diethylene glycol-fumaric acid-isophthalic acid copolymer [31531-65-4] and 33% styrene and 0.0066M triphenylsulfonium hexafluoroarsenate (I) [57900-42-2] was applied to steel strips and passed through a curing oven contg. UV lamps. Complete cure was obtained at 35-50 ft/min compared with 60 ft/min for a compn. contg. benzoin Bu ether instead of I.

IT 57900-42-2

(catalysts, for curing of photocurable  
coating compns.)

RN 57900-42-2 HCA

CN Sulfonium, triphenyl-, hexafluoroarsenate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

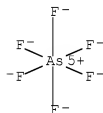


CM 2

CRN 16973-45-8

CMF As F6

CCI CCS



IT 57835-99-1 57840-38-7

(catalysts, for photocuring of coating compns.)

RN 57835-99-1 HCA

CN Sulfonium, triphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

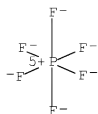


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



RN 57840-38-7 HCA  
 CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA  
 INDEX NAME)

CM 1

CRN 18393-55-0

CMF C18 H15 S

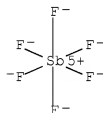


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC C08J003-28; G03C001-71; B01J031-16  
 CC 42-9 (Coatings, Inks, and Related Products)  
 ST polyester arylsulfonium photocuring catalyst; sulfonium  
 curing catalyst coating

IT Coating materials  
 (photocurable, crosslinking of, catalysts for,  
 triarylsulfonium salts as)

IT 57900-42-2  
 (catalysts, for curing of photocurable  
 coating compns.)

IT 15647-89-9 57835-99-1 57840-38-7 66482-71-1  
 (catalysts, for photocuring of coating compns.)

IT 106-90-1 9011-14-7 15625-89-5 25584-83-2 31531-65-4  
 70068-84-7  
 (photocuring catalysts for, triarylsulfonium salts as)

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FORMULAS (VII) OR (VIIA)

=> D L118 1-9 BIB ABS HITSTR HITIND

L118 ANSWER 1 OF 9 HCA COPYRIGHT 2008 ACS on STN

AN 139:314532 HCA Full-text

TI Radiation sensitive composition and compound

IN Kodama, Kunihiro

PA Fuji Photo Film Co., Ltd., Japan

SO Eur. Pat. Appl., 99 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 1353225	A2	20031015	EP 2003-7989	200304 10
				<--	
	EP 1353225	A3	20031112		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 20030224288	A1	20031204	US 2003-409100	200304 09
				<--	
	KR 2004002488	A	20040107	KR 2003-22609	

200304  
10

JP 2004139014

A

20040513

JP 2003-106524

200304  
10

PRAI JP 2002-108104

A

20020410 <--

JP 2002-240661

A

20020821 <--

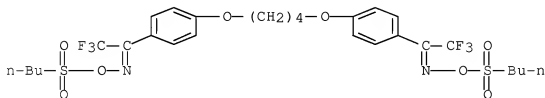
AB The present invention relates to a stimulation sensitive compn. used for a semiconductor prodn. process such as IC, a liq. crystal, the prodn. of a circuit substrate such as a thermal head, further, other photo application system, lithog. printing, an acid curing compn., a radical curing compn. and the like. The present invention relates to a stimulation sensitive compn. comprising: (A) a compd. represented by:  $\text{ArC(=O)CR}_6\text{R}_7\text{S+Y}_1\text{Y}_2\text{X-}$  (Ar = aryl or arom. group contg. a hetero atom;  $\text{R}_6 = \text{H}$ , cyano, alkyl, aryl group;  $\text{R}_7 = \text{monovalent org. group}$ ;  $\text{Y}_{1,2} = \text{alkyl, aryl, aralkyl, etc.}$ ;  $\text{X-} = \text{non-nucleophilic anion}$ ) which is capable of generating an acid or a radical by stimulation from the external. (B) a resin.

IT 610301-48-9

(acid generating agent; radiation sensitive resist compn. for semiconductor prodn. process contg.)

RN 610301-48-9 HCA

CN Ethanone, 1,1'-[1,4-butanediylbis(oxy-4,1-phenylene)]bis[2,2,2-trifluoro-, bis[0-(butylsulfonyl)oxime] (9CI) (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-039; G03F007-038; C07C323-22

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 66003-78-9 133710-62-0 138529-81-4 144317-44-2 193345-23-2  
197447-16-8 220475-58-1 227199-92-0 241806-75-7 258341-98-9  
258872-05-8 284474-28-8 301153-77-5 301664-71-1 301664-72-2  
347193-28-6 389859-76-1 391232-40-9 398141-17-8 398141-18-9  
398141-19-0 474510-76-4 592544-87-1 610301-08-1 610301-09-2

610301-10-5 610301-12-7 610301-13-8 610301-14-9 610301-16-1  
 610301-18-3 610301-19-4 610301-21-8 610301-23-0 610301-25-2  
 610301-26-3 610301-28-5 610301-30-9 610301-32-1 610301-34-3  
 610301-36-5 610301-38-7 610301-40-1 610301-42-3 610301-44-5  
 610301-46-7 610301-47-8 610301-48-9

(acid generating agent; radiation sensitive resist compn. for semiconductor prodn. process contg.)

IT 24979-69-9P 24979-70-2P, VP-5000 143336-94-1P 185405-14-5P  
 250378-10-0P, Butyrolactone methacrylate  
 -2-Ethyl-2-adamantyl methacrylate copolymer 289623-64-9P  
 312620-54-5P 321164-59-4P 345212-27-3P 359635-35-1P  
 370102-83-3P 370866-39-0P 391232-36-3P 391613-77-7P  
 398140-43-7P 398140-45-9P 398140-57-3P 398140-59-5P  
 398140-68-6P 398140-69-7P 398140-77-7P 405509-19-5P  
 406702-00-9P 430437-18-6P 459418-30-5P 471257-28-0P  
 482609-97-2P 508210-04-6P 515876-73-0P 521303-15-1P  
 521303-16-2P 524699-47-6P 574735-94-7P 607710-65-6P  
 607710-66-7P 607710-67-8P 607710-68-9P 607710-69-0P  
 607710-70-3P 607710-71-4P 607710-72-5P 607710-73-6P  
 607710-76-9P 607710-77-0P 610300-92-0P 610300-93-1P  
 610300-94-2P 610300-95-3P 610300-96-4P 610300-97-5P  
 610300-98-6P 610301-00-3P 610301-01-4P 610301-03-6P  
 610301-04-7P 610301-05-8P

(radiation sensitive resist compn. for semiconductor prodn. process contg.)

L118 ANSWER 2 OF 9 HCA COPYRIGHT 2008 ACS on STN

AN 139:221533 HCA Full-text

TI Low-malodor heat-developable photosensitive materials, their manufacture, and their imaging by laser scanning exposure

IN Takeyama, Toshihisa

PA Konica Co., Japan

SO Jpn. Kokai Tokkyo Koho, 59 pp.

CODEN: JKXXAF

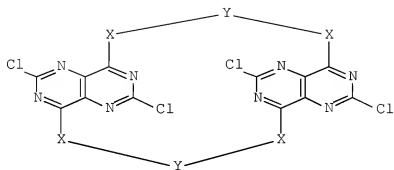
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	
PI	JP 2003241334	A	20030827	JP 2002-39789	20020218
	JP 4061919	B2	20080319		
PRAI	JP 2002-39789		20020218	<--	
OS	MARPAT 139:221533				





I

AB The photosensitive material has on 1 side of a support a backing layer and on the other side of the support an image-forming layer contg. at least org. Ag salts, photosensitive Ag halides, and reducing agents and protective layers, wherein the image-forming layer or the protective layer contains binder of  $\geq 1$  of resins selected from cycloolefin polymers, N-phenylmaleimide polymers, 1,1-bis(4-hydroxyphenyl)cyclohexane polymers, and 1,1-bis(4-hydroxyphenyl)-3,3,5-trimethylcyclohexane polymers. In another alternative, the protective layer contains  $\geq 1$  of binder resins having heat distortion temp. (ASTM D 648, load 18.6 kg/cm<sup>2</sup>) 100-300°, preferably, polyarylates, poly(ether sulfones), and/or polyamide-imides. In another alternatives, the protective layer comprise a cured layer formed by crosslinking of crosslinkable compds. with actinic energy ray irradsn. Preferably, an adhesive layer is disposed between the image-forming layer and the protective layer. The photosensitive material is manufd. by lamination-transfer of a protective layer on a releasable support onto an image-forming layer/support laminate. The adhesive layer will be laminated on the image-forming layer or laminated with the protective layer prior to the lamination-transfer step. In another alternative, a heat-developable photosensitive material has an image-forming layer or a protective layer contg. binders involving  $\geq 1$  of resins with total of acid value and hydroxyl value being 20-300 mg-KOH/g and arom. polyisocyanates or metal polyvalent alkoxides as crosslinking agents. In another alternative, the protection layer or the backing layer contains Mg silicate, SiO<sub>2</sub>-ZnO-Al<sub>2</sub>O<sub>3</sub> composite, Li<sub>2</sub>CO<sub>3</sub>-Al(OH)<sub>3</sub>

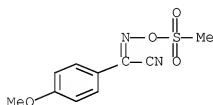
inclusion compds., and/or zeolite. In another alternative, the protective layer or the backing layer contain  $\geq 1$  compds. selected from oxazoline group-contg. compds., cyclodextrin (derivs.), thiaclixarene (derivs.), or compds. represented by general formula I (X = divalent linkage composed of hetero atom; Y = divalent org. group). The photosensitive material is imaged by scanning exposure by using laser light whose angle made by a surface to be exposed and the laser light is not substantially vertical, by using vertical multi-laser whose exposure wavelengths are not uniform, or by using  $\geq 2$  laser lights.

IT 193222-02-5

(precursor, protective layer contg.; manif. of low-malodor heat-developable photosensitive materials and their imaging by laser scanning exposure)

RN 193222-02-5 HCA

CN Benzeneacetonitrile, 4-methoxy- $\alpha$ -[[ (methylsulfonyl)oxy]imino]-  
(CA INDEX NAME)



IC ICM G03C001-498

ICS G03C001-76; G03C005-08

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Polyvinyl butyrals

(S-Lec BL-S, S-Lec BL 5Z, adhesive layer contg.; manif. of low-malodor heat-developable photosensitive materials and their imaging by laser scanning exposure)

IT 67653-78-5, Dipentaerythritol hexaacrylate homopolymer

101232-56-8, Dipentaerythritol hexaacrylate-Kayarad R 128H

copolymer 111431-68-6, Dianal BR 87-dipentaerythritol

hexaacrylate copolymer 257887-56-2, Celloxide 2021-Epo

Tohto ST 3000 copolymer 257887-57-3, Celloxide 2081-Epolead GT 30

copolymer 272458-71-6, Dipentaerythritol hexaacrylate-UV

1700B copolymer 586963-94-2, Aronix M 210-dipentaerythritol

hexaacrylate-NK Oligo U 4HA copolymer 586963-95-3,

Dipentaerythritol acrylate-pentaerythritol

acrylate copolymer

(actinic energy ray-cured protective layer; manif. of

low-malodor heat-developable photosensitive materials and their imaging by laser scanning exposure)

IT 1886-74-4 4450-68-4 5551-72-4 85342-62-7 133710-62-0  
193222-02-5 380848-50-0

(precursor, protective layer contg.; manuf. of low-malodor heat-developable photosensitive materials and their imaging by laser scanning exposure)

L118 ANSWER 3 OF 9 HCA COPYRIGHT 2008 ACS on STN

AN 131:293313 HCA Full-text

TI Positively photosensitive and thermosetting polymer compositions and formation of electrically insulating patterns using them

IN Toji, Mineko; Sasaki, Masaki; Saito, Teruo

PA Taiyo Ink Seizo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 11286535	A	19991019	JP 1998-212020	199807 13

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PRAI JP 1998-36628 A 19980203 <--

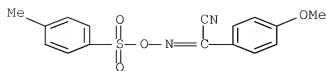
AB The comps. contain (A) acid-decomposable ester-contg. polymers with wt.-av. mol. wt. 500-40,000, (B) acid-generating compds. by radiation of active energy beam, (C) epoxy resins, and (D) org. solvents. The insulating patterns are formed by (1) applying the comps. on substrates, (2) heating, (3) selectively irradiating the resulting tack-free films with active energy beam for acid generation by decompn. of B, (4) heating at 60-120° to decomp. A of exposed parts and give alkali-sol. parts, (5) developing with alkali aq. solns. for removal of the exposed parts, and (6) heating at 140-180° for crosslinking of C by acids generated from A and B to cure nonexposed parts. This method is useful for manuf. of multilayered printed circuit boards. Elec. insulating patterns showing good solder-heat resistance are obtained from the comps.

IT 82424-53-1, PAI 101

(acid generators; pos. photosensitive and thermosetting polymer comps. for formation of elec. insulating patterns)

RN 82424-53-1 HCA

CN Benzeneacetonitrile, 4-methoxy- $\alpha$ -[[[(4-methylphenyl)sulfonyl]oxy]imino]- (CA INDEX NAME)



IC ICM C08G059-40  
 ICS C08K005-00; C08L033-02; C08L061-14; C08L063-00; C08L101-06;  
 G03F007-004; G03F007-032; G03F007-033; G03F007-039; H05K003-28

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38, 76

ST pos photoresist elec insulating pattern formation; acrylic  
 polymer epoxy resin pos photoresist; novolak blend epoxy resin pos  
 photoresist; printed circuit board manuf pos photoresist

IT 82424-53-1, PAI 101 205944-57-6, SP 152  
 (acid generators; pos. photosensitive and thermosetting polymer  
 compns. for formation of elec. insulating patterns)

IT 246544-04-7P, Acrylic acid-methyl methacrylate-  
 vinyl isobutyl ether copolymer 246544-05-8P, BRG 558-  
 vinyl isobutyl ether copolymer 246544-06-9P  
 (pos. photosensitive and thermosetting polymer compns. for  
 formation of elec. insulating patterns)

L118 ANSWER 4 OF 9 HCA COPYRIGHT 2008 ACS on STN

AN 131:11423 HCA Full-text

TI Photoinitiators and photoinitiation Part 15. The photodecomposition  
 of some [Z] O-sulfonyl 2-oximinoketones and some [Z] O-sulfamoyl  
 2-oximinoketones

AU Hageman, Hendrik J.; Oosterhoff, Pieter; Verbeek, Jan

CS The Chemical Laboratory, The University of Kent, Canterbury, Kent,  
 CT2 7NH, UK

SO Journal of Photochemistry and Photobiology, A: Chemistry (   
 1999), 121(3), 207-211  
 CODEN: JPPCEJ; ISSN: 1010-6030

PB Elsevier Science S.A.

DT Journal

LA English

AB The photodecompn. of some [Z]-O-sulfonyl 2-oximinoketones is studied  
 by ESR spectroscopy. At low temps. (T<-70°),  $\alpha$ -ketoiminyl radicals  
 are obsd., indicative of initial N-O bond cleavage, implying that O-  
 sulfonyl (and O-sulfamoyl) fragments are split off as sulfonyloxy  
 (and sulfamoyloxy) radicals in much the same way as acyloxy radicals  
 in the case of O-acyl 2-oximinoketones studied before. At room temp.

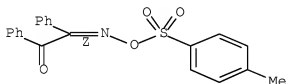
in the presence of a spin-trap, the trapped benzoyl radical is obsd., which must have been formed by fragmentation of the  $\alpha$ -ketoiminyl radical. The title compds. are shown to photoinitiate the polymn. of acrylates and to photoinduce the acid-catalyzed crosslinking of a melamine resin.

IT 28867-81-4P 28867-83-6P 225388-66-9P  
 225388-67-0P 225388-68-1P 225388-69-2P  
 225388-70-5P 225388-71-6P 225388-72-7P  
 ([Z] O-sulfonyl 2-oximinoketones and [Z] O-sulfonyl  
 2-oximinoketones as photoinitiator for free radical  
 polymn.)

RN 28867-81-4 HCA

CN Ethanedione, diphenyl-, mono[O-[(4-methylphenyl)sulfonyl]oxime],  
 (1Z)- (9CI) (CA INDEX NAME)

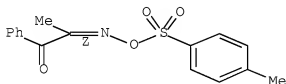
Double bond geometry as shown.



RN 28867-83-6 HCA

CN 1,2-Propanedione, 1-phenyl-, 2-[O-[(4-methylphenyl)sulfonyl]oxime],  
 (2Z)- (CA INDEX NAME)

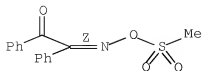
Double bond geometry as shown.



RN 225388-66-9 HCA

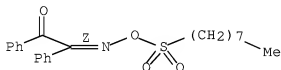
CN Ethanedione, diphenyl-, mono[O-(methylsulfonyl)oxime], (1Z)- (9CI)  
 (CA INDEX NAME)

Double bond geometry as shown.



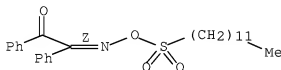
RN 225388-67-0 HCA  
 CN Ethanedione, diphenyl-, mono[O-(octylsulfonyl)oxime], (1Z)- (9CI)  
 (CA INDEX NAME)

Double bond geometry as shown.



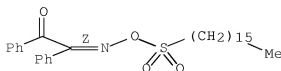
RN 225388-68-1 HCA  
 CN Ethanedione, diphenyl-, mono[O-(dodecylsulfonyl)oxime], (1Z)- (9CI)  
 (CA INDEX NAME)

Double bond geometry as shown.



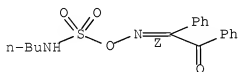
RN 225388-69-2 HCA  
 CN Ethanedione, diphenyl-, mono[O-(hexadecylsulfonyl)oxime], (1Z)-  
 (9CI) (CA INDEX NAME)

Double bond geometry as shown.



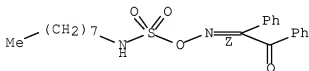
RN 225388-70-5 HCA  
 CN Hydroxylamine-O-sulfonamide, N'-butyl-N-(oxodiphenylethylidene)-,  
 [N(Z)]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



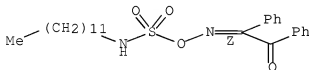
RN 225388-71-6 HCA  
 CN Hydroxylamine-O-sulfonamide, N'-octyl-N-(oxodiphenylethylidene)-,  
 [N(Z)]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 225388-72-7 HCA  
 CN Hydroxylamine-O-sulfonamide, N'-dodecyl-N-(oxodiphenylethylidene)-,  
 [N(Z)]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 35  
 IT Phenolic resins, properties

Phenolic resins, properties

(aminoplast-, curing; crosslinking and [Z] O-sulfonyl  
2-oximinoketones and [Z] O-sulfamoyl 2-oximinoketones as  
photoinitiators)

IT Aminoplasts

Aminoplasts

(phenolic, curing; crosslinking and [Z] O-sulfonyl  
2-oximinoketones and [Z] O-sulfamoyl 2-oximinoketones as  
photoinitiators)

IT 28867-81-4P 28867-83-6P 225388-66-9P

225388-67-0P 225388-68-1P 225388-69-2P

225388-70-5P 225388-71-6P 225388-72-7P

([Z] O-sulfonyl 2-oximinoketones and [Z] O-sulfamoyl  
2-oximinoketones as photoinitiator for free radical  
polymn.)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L118 ANSWER 5 OF 9 HCA COPYRIGHT 2008 ACS on STN

AN 109:94770 HCA Full-text

OREF 109:15815a,15818a

TI Latent acid catalysts for thermosetting coatings

AU Pappas, S. Peter; Pappas, Betty C.; Hong, Xiao Yin; Krichmayer, R.;  
Berner, G.

CS Polym. Coatings Dep., North Dakota State Univ., Fargo, ND, 58105,  
USA

SO Proceedings of the Water-Borne and Higher-Solids Coatings Symposium  
(1988), 15th, 24-32

CODEN: PWHSD5; ISSN: 0164-0402

DT Journal

LA English

AB dl-(I) and meso-2,3-dihydroxy-2,3-diphenyl-1,4-butylene ditosylates  
and dl-2,3-dimethoxy-2,3-diphenyl-1,4-butylene ditosylate were prepd.  
and the activity of I as latent acid catalysts for crosslinking of  
melamine resin-polyol coatings was the highest. The cure response  
and storage stability of I compared favorably with other latent acid  
catalysts. The above ditosylates were inactive as radical polymn.  
catalysts. The catalytic activity of these ditosylates was  
interpreted in terms of a concerted bond cleavage mechanism for  
formation of p-toluenesulfonic acid with participation of the alc.  
group. There was also an evidence of acid-catalyzed conversion of  
hydroperoxides into initiating radicals.

IT 81452-27-9

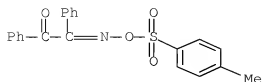
(catalysts, for crosslinking of melamine resin-polyol coatings,  
activity of)

RN 81452-27-9 HCA

CN Ethanedione, diphenyl-, mono[O-[(4-methylphenyl)sulfonyl]oxime]



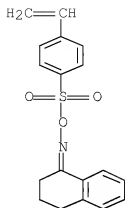
(9CI) (CA INDEX NAME)



CC 42-3 (Coatings, Inks, and Related Products)  
IT 104-15-4, p-Toluenesulfonic acid, uses and miscellaneous  
15051-90-8 81452-27-9  
(catalysts, for crosslinking of melamine resin-polyol coatings,  
activity of)

L118 ANSWER 6 OF 9 HCA COPYRIGHT 2008 ACS on STN  
AN 105:6929 HCA Full-text  
OREF 105:1295a,1298a  
TI Novel photocrosslinkable polymers with pendant imino sulfonate  
groups  
AU Shirai, Masamitsu; Wakinaka, Satoru; Ishida, Haruyuki; Tsunooka,  
Masahiro; Tanaka, Makoto  
CS Fac. Eng., Univ. Osaka Prefect., Sakai, 591, Japan  
SO Journal of Polymer Science, Part C: Polymer Letters (1986  
, 24(3), 119-24  
CODEN: JSCLE2; ISSN: 0887-6258  
DT Journal  
LA English  
AB The UV photocuring of glycidyl methacrylate-1,2,3,4- tetrahydro-1-  
naphthylideneimino-p-styrenesulfonate (I) copolymer [102667-93-6] and  
thioglycidyl methacrylate-Me methacrylate-I copolymer [102667-94-7]  
was attributed to cationic polymn. of the epoxy or epithio groups  
catalyzed by the sulfonic acid formed via photolysis of the  
iminosulfonate pendant groups in the copolymers. The extent of  
photocuring, as measured by the amt. of insol. fraction of the  
crosslinked product in THF, increased with increasing irradiation time,  
fraction of iminosulfonate pendant groups, and post-treatment heating  
time.

IT 102667-92-5P  
(prepn. of)  
RN 102667-92-5 HCA  
CN 1(2H)-Naphthalenone, 3,4-dihydro-, O-[(4-  
ethenylphenyl)sulfonyl]oxime (CA INDEX NAME)



CC 35-8 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 25  
 ST photocuring methacrylate copolymer cationic polymn;  
 photolysis iminosulfonate crosslinking polymethacrylate; kinetics  
 photocuring methacrylate styrenesulfonate copolymer;  
 glycidyl methacrylate polymer crosslinking; thioglycidyl  
 methacrylate polymer crosslinking  
 IT Polymerization  
 (radical, of glycidyl and thioglycidyl methacrylate  
 with naphthylideneiminostyrenesulfonates)  
 IT 102667-93-6 102667-94-7  
 (photocuring of, mechanism of)  
 IT 102667-92-5P  
 (prepn. of)

L118 ANSWER 7 OF 9 HCA COPYRIGHT 2008 ACS on STN

AN 103:143446 HCA Full-text

OREF 103:22977a,22980a

TI Curing acid-curable lacquers

IN Berner, Godwin; Rutsch, Werner

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 139609	A1	19850502	EP 1984-810394	

198408

13

EP 139609 B1 19870204  
R: DE, FR, GB, NL  
US 4540598 A 19850910 US 1984-639040 198408 09

CA 1241930 A1 19880913 CA 1984-461022 198408 15

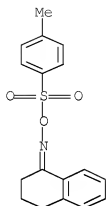
JP 60065072 A 19850413 JP 1984-171394 198408 17

JP 04073465 B 19921120  
PRAI CH 1983-4484 A 19830817 <--

AB An acid-curable stoving lacquer contg. as catalyst R1(CO)mCR2:NO3SR [R = C1-18 alkyl, (un)substituted C6-10 aryl, C5-12 cycloalkyl, C7-9 arylalkyl, camphoroyl, CF3, CC13, NH2; R1 = C1-12 alkyl, C1-4 haloalkyl, C2-6 alkenyl, C5-12 cycloalkyl, (un)substituted C6-10 aryl, furyl, thienyl, C7-12 arylalkyl, C1-8 alkoxy, C5-8 cycloalkoxy, phenoxy, ureido; R2 = CN, C2-5 alkanoyl, Bz, C2-5 alkoxycarbonyl, CO2Ph, amino, morpholino, or piperidinyl, or as R1, or R1 and R2 complete a 5-8 membered (un)substituted ring; m = 0,1] or [R1(CO)mCR2:NO3S]2Z (R1 and R2 as above; Z = C2-12 alkylene, phenylene, C1-12-alkylphenylene, naphthylene, biphenylene, oxydiphenylene) are cured by irradiation with short-wavelength light to form free sulfonic acid groups and concurrent curing at high temp. Thus, a coating compn. comprising Cymel 301 17.93, BuOAc 9.73, cellulose acetate butyrate 1.83, processing aids 0.39, Paraloid AT 410 [78206-66-3] 57.30, and BuOH 10.12 parts was mixed with 1% benzil monooxime tosylate [81452-27-9], spread to 30-μ thickness, irradiated with 2 80-W UV lamps for 4.2 s, and cured 30 min at 100° to reach pendulum hardness (DIN 53 158) 184 s.

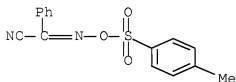
IT 6339-09-9 17512-88-8 22510-03-8 40559-90-8 81452-27-9 98503-39-0 98503-40-3 98503-41-4 98503-42-5 98503-43-6 98503-44-7 98503-45-8 98503-46-9 98503-47-0 98503-48-1 98503-49-2 98503-50-5 98503-51-6 98503-52-7 (catalysts, photosensitive, for curing of acid-curable coatings)

RN 6339-09-9 HCA  
CN 1(2H)-Naphthalenone, 3,4-dihydro-, O-[(4-methylphenyl)sulfonyl]oxime (CA INDEX NAME)



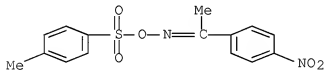
RN 17512-88-8 HCA

CN Benzeneacetonitrile,  $\alpha$ -[[[(4-methylphenyl)sulfonyl]oxy]imino]-  
(CA INDEX NAME)



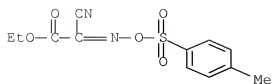
RN 22510-03-8 HCA

CN Ethanone, 1-(4-nitrophenyl)-, O-[(4-methylphenyl)sulfonyl]oxime (CA  
INDEX NAME)

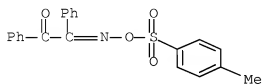


RN 40559-90-8 HCA

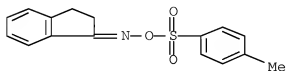
CN Acetic acid, cyano[[[(4-methylphenyl)sulfonyl]oxy]imino]-, ethyl  
ester (9CI) (CA INDEX NAME)



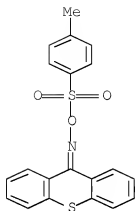
RN 81452-27-9 HCA  
 CN Ethanedione, diphenyl-, mono[O-[(4-methylphenyl)sulfonyl]oxime]  
 (9CI) (CA INDEX NAME)



RN 98503-39-0 HCA  
 CN 1H-Inden-1-one, 2,3-dihydro-, O-[(4-methylphenyl)sulfonyl]oxime (CA  
 INDEX NAME)

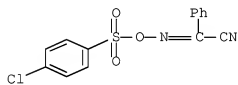


RN 98503-40-3 HCA  
 CN 9H-Thioxanthen-9-one, O-[(4-methylphenyl)sulfonyl]oxime (CA INDEX  
 NAME)



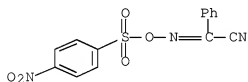
RN 98503-41-4 HCA

CN Benzeneacetonitrile,  $\alpha$ -[[[(4-chlorophenyl)sulfonyl]oxy]imino]-  
(CA INDEX NAME)



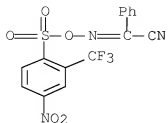
RN 98503-42-5 HCA

CN Benzeneacetonitrile,  $\alpha$ -[[[(4-nitrophenyl)sulfonyl]oxy]imino]-  
(CA INDEX NAME)



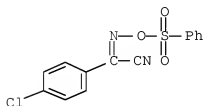
RN 98503-43-6 HCA

CN Benzeneacetonitrile,  $\alpha$ -[[[[4-nitro-2-(trifluoromethyl)phenyl]sulfonyl]oxy]imino]- (CA INDEX NAME)



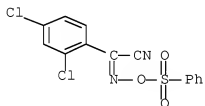
RN 98503-44-7 HCA

CN Benzeneacetonitrile, 4-chloro- $\alpha$ -[[ (phenylsulfonyl)oxy]imino]-  
(CA INDEX NAME)



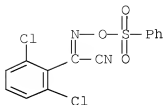
RN 98503-45-8 HCA

CN Benzeneacetonitrile, 2,4-dichloro- $\alpha$ -  
[[ (phenylsulfonyl)oxy]imino]- (CA INDEX NAME)



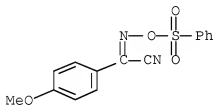
RN 98503-46-9 HCA

CN Benzeneacetonitrile, 2,6-dichloro- $\alpha$ -  
[[ (phenylsulfonyl)oxy]imino]- (CA INDEX NAME)



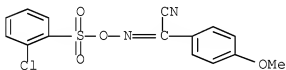
RN 98503-47-0 HCA

CN Benzeneacetonitrile, 4-methoxy- $\alpha$ -[[ (phenylsulfonyl)oxy]imino]-  
(CA INDEX NAME)



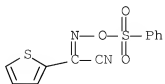
RN 98503-48-1 HCA

CN Benzeneacetonitrile,  $\alpha$ -[[[(2-chlorophenyl)sulfonyl]oxy]imino]-  
4-methoxy- (CA INDEX NAME)



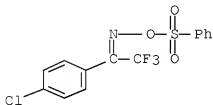
RN 98503-49-2 HCA

CN 2-Thiopheneacetonitrile,  $\alpha$ -[[ (phenylsulfonyl)oxy]imino]- (CA  
INDEX NAME)

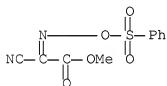




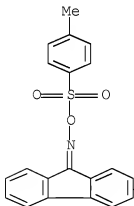
RN 98503-50-5 HCA  
 CN Ethanone, 1-(4-chlorophenyl)-2,2,2-trifluoro-, O-(phenylsulfonyl)oxime (CA INDEX NAME)



RN 98503-51-6 HCA  
 CN Acetic acid, cyano[[ (phenylsulfonyl)oxy]imino]-, methyl ester (9CI)  
 (CA INDEX NAME)



RN 98503-52-7 HCA  
 CN 9H-Fluoren-9-one, O-[(4-methylphenyl)sulfonyl]oxime (CA INDEX NAME)



IC ICM C08K005-42  
ICS C09D003-48

CC 42-3 (Coatings, Inks, and Related Products)

ST oxime sulfonate curing catalyst; UV curing  
coating; benzil monooxime tosylate catalyst

IT Coating materials  
(acrylic-melamine, photosensitive acid curing  
catalysts for)

IT Crosslinking catalysts  
(photochem., oxime sulfonates, for acrylic-melamine  
coatings)

IT 6339-09-9 17512-88-8 22510-03-8  
40559-90-8 81452-27-9 98503-39-0  
98503-40-3 98503-41-4 98503-42-5  
98503-43-6 98503-44-7 98503-45-8  
98503-46-9 98503-47-0 98503-48-1  
98503-49-2 98503-50-5 98503-51-6  
98503-52-7  
(catalysts, photosensitive, for curing of acid-  
curable coatings)

IT 78206-66-3  
(coatings, with melamine resins, photoactivated acid  
curing catalysts for)

L118 ANSWER 8 OF 9 HCA COPYRIGHT 2008 ACS on STN

AN 102:7596 HCA Full-text

OREF 102:1369a,1372a

II Photo-crosslinking of poly(2,3-epoxypropyl methacrylate)  
with imino sulfonates

AU Shirai, Masamitsu; Masuda, Tomoko; Tsunooka, Masahiro; Tanaka,  
Makoto

CS Fac. Eng., Univ. Osaka Prefect., Sakai, 591, Japan

SO Makromolekulare Chemie, Rapid Communications (1984),  
5(10), 689-93

CODEN: MCRCD4; ISSN: 0173-2803

DT Journal

LA English

AB Poly(glycidyl methacrylate) (I) [25067-05-4] films contg. Tetralone  
oxime p-toluenesulfonate (II) [6339-09-9], the corresponding  
methanesulfonate [80053-76-5], or the sulfonates of acetophenone  
oxime became insol. on UV irradiation. No insolubilization occurred  
without the sulfonates. The products of photolysis of II were the  
ketone, azine, and sulfonic acid. The acid may be the active species  
in crosslinking, since conventional radical initiators were inactive.  
The slightly higher efficiency of the Tetralone oxime sulfonates may  
result from their absorption at higher wavelengths. The  
toluenesulfonates were more effective than the methanesulfonates,

although there was no difference in their rate of photodecompn. in I.  
The insol. fraction of irradiated I films contg. oxime sulfonates  
increased with increasing post-heating in the dark, although heat did  
not crosslink unirradiated films.

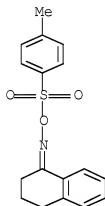
IT 6339-09-9 26370-56-9 80053-74-3

80053-76-5

(catalyst, for photochem. curing of poly(glycidyl  
methacrylate))

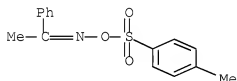
RN 6339-09-9 HCA

CN 1(2H)-Naphthalenone, 3,4-dihydro-, O-[(4-methylphenyl)sulfonyl]oxime  
(CA INDEX NAME)



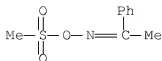
RN 26370-56-9 HCA

CN Ethanone, 1-phenyl-, O-[(4-methylphenyl)sulfonyl]oxime (CA INDEX  
NAME)

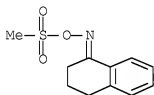


RN 80053-74-3 HCA

CN Ethanone, 1-phenyl-, O-(methylsulfonyl)oxime (CA INDEX NAME)



RN 80053-76-5 HCA  
 CN 1(2H)-Naphthalenone, 3,4-dihydro-, O-(methylsulfonyl)oxime (CA  
 INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 74  
 ST photochem crosslinking catalyst; oxime sulfonate catalyst  
 photocuring; Tetralone oxime sulfonate photocuring  
 ; benzophenone oxime sulfonate photocuring; glycidyl  
 methacrylate polymer photocuring  
 IT Crosslinking catalysts  
 (photochem., ketoxime sulfonates, for poly(glycidyl  
 methacrylate))  
 IT 6339-09-9 26370-56-9 80053-74-3  
 80053-76-5  
 (catalyst, for photochem. curing of poly(glycidyl  
 methacrylate))  
 IT 25067-05-4  
 (photocuring of, by ketone oxime sulfonates)

L118 ANSWER 9 OF 9 HCA COPYRIGHT 2008 ACS on STN  
 AN 97:94072 HCA Full-text  
 OREF 97:15689a,15692a  
 TI Thermosetting coating composition containing a blocked  
 acid catalyst  
 IN Reesink, Johan Bernhard; Hageman, Hendrik Jan; Wiersum, Ulfert Elle  
 PA AKZO N. V. , Neth.  
 SO Eur. Pat. Appl., 20 pp.  
 CODEN: EPXXDW  
 DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 44115	A1	19820120	EP 1981-200794	19810709
				<--	
	EP 44115	B1	19841010		
	EP 44115	B2	19870603		
	R: AT, BE, DE, FR, GB, IT, NL, SE				
	AT 9811	T	19841015	AT 1981-200794	19810709
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	AU 8172796	A	19820121	AU 1981-72796	19810713
				<--	
	AU 547354	B2	19851017		
	JP 57049669	A	19820323	JP 1981-108331	19810713
				<--	
	BR 8104469	A	19820330	BR 1981-4469	19810713
				<--	
	ZA 8104767	A	19820728	ZA 1981-4767	19810713
				<--	
	ES 503896	A1	19820816	ES 1981-503896	19810713
				<--	
	US 4351935	A	19820928	US 1981-283332	19810714
				<--	
PRAI	NL 1980-4031	A	19800714	<--	
	EP 1981-200794	A	19810709	<--	
AB	Coatings suitable for electrostatic spraying comprise an acid-curable amino resin and a sulfonic acid oximate catalyst, the compn. having long shelf life. Thus, a pigment dispersion was prepd. by mixing TiO2 24, acrylate resin 3, hexakis(methoxymethyl)melamine (I)				

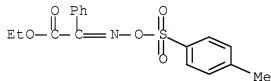
0.5, xylene 1, and ethylene glycol acetate 1 part. A diester diol mixt. comprising equal parts trimethylolpropane didecanoate and a mixt. of 1 part di(neopentyl glycol) isophthalate and 2 parts di(neopentyl glycol) phthalate was added to the pigment dispersion in a ratio of 3 parts diester diol to 1 part I. A 10% MIBK soln. of  $\beta$ -benzil monoxime tosylate [ 81452-27-9] (0.7% as toluenesulfonic acid) was added, and the paint was dild. to a suitable viscosity and applied to a phosphated iron panel. The resulting coating had thickness 40-5 nm, 20° gloss (ASTM D523) 9.5%, Persoz hardness 298 s, conical mandrel test (ASTM 522-60, 9 mm) 12, and Erichsen indentation 6.8 mm.

IT 17512-83-3 22510-03-8 81452-27-9  
81452-28-0 81452-30-4 81452-31-5  
81452-32-6

(curing catalysts, for amino resin coatings)

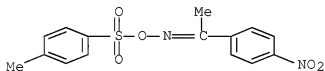
RN 17512-83-3 HCA

CN Benzeneacetic acid,  $\alpha$ -[[[(4-methylphenyl)sulfonyl]oxy]imino]-, ethyl ester (CA INDEX NAME)



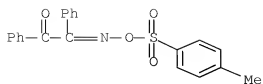
RN 22510-03-8 HCA

CN Ethanone, 1-(4-nitrophenyl)-, O-[(4-methylphenyl)sulfonyl]oxime (CA INDEX NAME)



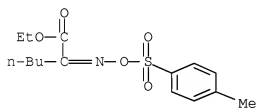
RN 81452-27-9 HCA

CN Ethanedione, diphenyl-, mono[O-[(4-methylphenyl)sulfonyl]oxime] (9CI) (CA INDEX NAME)



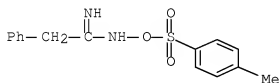
RN 81452-28-0 HCA

CN Hexanoic acid, 2-[[[(4-methylphenyl)sulfonyl]oxy]imino]-, ethyl ester (CA INDEX NAME)



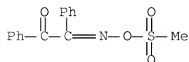
RN 81452-30-4 HCA

CN Benzenesulfonic acid, 4-methyl-, (1-imino-2-phenylethyl)azanyl ester (CA INDEX NAME)

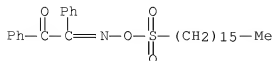


RN 81452-31-5 HCA

CN Ethanedione, diphenyl-, mono[O-(methylsulfonyl)oxime] (9CI) (CA INDEX NAME)



RN 81452-32-6 HCA  
CN Ethanedione, diphenyl-, mono[O-(hexadecylsulfonyl)oxime] (9CI) (CA  
INDEX NAME)



IC C09D003-50; C08K005-42; C08L061-20  
CC 42-10 (Coatings, Inks, and Related Products)  
ST benzil oxime tosylate curing coating;  
methoxymethylmelamine ester diol coating  
IT Coating materials  
(amino resin condensates, curing catalysts for, blocked  
acids as)  
IT 81455-30-3 81455-32-5  
(coatings, curing catalysts for, blocked acids as)  
IT 17512-83-3 22510-03-8 81452-27-9  
81452-28-0 81452-30-4 81452-31-5  
81452-32-6  
(curing catalysts, for amino resin coatings)

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FORMULA (VIII)

=> D L122 1-3 BIB ABS HITSTR HITIND

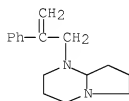
L122 ANSWER 1 OF 3 HCA COPYRIGHT 2008 ACS on STN  
AN 139:324798 HCA Full-text  
TI Curing of surface coatings containing radiation-  
curable composition via plasma  
IN Misev, Ljubomir; Valet, Andreas; Simmendinger, Peter; Jung, Tunja  
PA Ciba Specialty Chemicals Holding Inc., Switz.  
SO PCT Int. Appl., 76 pp.  
CODEN: PIXXD2  
DT Patent  
LA English



FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2003089479	A2	20031030	WO 2003-EP4036	200304 17
				<--	
	WO 2003089479	A3	20040916		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2482470	A1	20031030	CA 2003-2482470	200304 17
				<--	
	AU 2003227644	A1	20031103	AU 2003-227644	200304 17
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	EP 1497338	A2	20050119	EP 2003-725054	200304 17
				<--	
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	BR 2003009389	A	20050419	BR 2003-9389	200304 17
				<--	
	CN 1646572	A	20050727	CN 2003-808766	200304 17
				<--	
	JP 2005523803	T	20050811	JP 2003-586198	200304 17

ZA	2004007710	A	20060628	ZA	2004-7710	
						200409 23
MX	2004PA09790	A	20041213	MX	2004-PA9790	200410 07
US	20050129859	A1	20050616	US	2004-511578	200410 13
IN	2004CN02602	A	20070720	IN	2004-CN2602	200411 19
PRAI	EP 2002-8254	A	20020419	<--		
WO	2003-EP4036	W	20030417			
OS	MARPAT 139:324798					
AB	Title coating consists of (A) at least one free radical-polymerizable compd. or (B) at least one compd. that, under the action of an acid, is able to enter into a polymn., polycondensation or polyaddn. reaction, or (C) at least one compd. that, under the action of a base, is able to enter into a polymn., polycondensation or polyaddn. reaction, or a mixt. of components (A) and (B), or a mixt. of components (A) and (C); and (D) at least one photolalent compd. that is activatable by plasma discharge. Thus, a radiation-curable formulation is prepd. by mixing Ebecryl 604 89.0, Sartomer SR 344 10.0, Ebecryl 350 1.0, and Irgacure 184 2.0 parts. The compn. is applied to a three-dimensional substrate and the curing is carried out in a plasma discharge chamber.					
IT	458568-52-0					(photolalent base; curing of surface coatings contg. radiation-curable compn. via plasma)
RN	458568-52-0	HCA				
CN	Pyrrolo[1,2-a]pyrimidine, octahydro-1-(2-phenyl-2-propen-1-yl)- (CA INDEX NAME)					



IC ICM C08F002-52  
ICS C08J007-04

CC 42-3 (Coatings, Inks, and Related Products)

ST curing coating induced plasma discharge chamber

IT Carbon black, uses  
(SP 250 (carbon black); curing of surface coatings  
contg. radiation-curable compn. via plasma)

IT Polysiloxanes, uses  
(acrylates, Ebecryl 350, reaction products with Ebecryl 604 and  
Sartomer SR 344; curing of surface coatings contg.  
radiation-curable compn. via plasma)

IT Epoxy resins, uses  
Polyesters, uses  
Polyurethanes, uses  
(acrylic; curing of surface coatings contg. radiation-  
curable compn. via plasma)

IT Light stabilizers  
UV stabilizers  
(curing of surface coatings contg. radiation-  
curable compn. via plasma)

IT Polyethers, uses  
(di-Me siloxane-, Byk 306, flow improver; curing of  
surface coatings contg. radiation-curable compn. via  
plasma)

IT Polysiloxanes, uses  
(di-Me, polyether-, Byk 306, flow improver; curing of  
surface coatings contg. radiation-curable compn. via  
plasma)

IT Polymerization catalysts  
(photochem., radical; curing of surface coatings contg.  
radiation-curable compn. via plasma)

IT Acrylic polymers, uses  
(polyurethane-; curing of surface coatings contg.  
radiation-curable compn. via plasma)

IT Coating materials  
(powder; curing of surface coatings induced by  
plasma in plasma discharge chamber)

IT Coating materials  
(radiation-curable; curing of surface  
coatings induced by plasma in plasma  
discharge chamber)

IT Plasma  
(surface coatings by curing polymerizable compns. using  
plasma)

IT 41556-26-7, Tinuvin 292 192662-79-6, Tinuvin 400

- (UV absorber; curing of surface coatings contg.  
radiation-curable compn. via plasma)
- IT 26570-48-9DP, Sartomer SR 344, reaction products with Ebecryl 604 and Ebecryl 350 79586-46-2DP, Ebecryl 604, reaction products with Sartomer SR 344 and Ebecryl 350 141525-43-1P, Ebecryl 830-hexanediol diacrylate-trimethylolpropane triacrylate copolymer 211190-80-6P, 4-Hydroxybutyl acrylate-isophorone diisocyanate copolymer 211190-81-7P, Diethyl malonate-1,5-pentanediol copolymer 211190-82-8P, Diethyl malonate-4-hydroxybutyl acrylate-isophorone diisocyanate-1,5-pentanediol copolymer 211254-29-4P 344585-10-0P, Araldite GY 250-Grilonit Epoxide 8-Grilonit V 51-31 copolymer 615286-38-9P, AralditeCy 179-dipropylene glycol-Tone 0301 copolymer 615286-39-0P, Ebecryl 284-Roskydal UA-VP-LS 2308 copolymer 615286-40-3P, Desmophen A 870-Desmophen VP-LS 2089-Roskydal UA-VP-LS 2337 copolymer  
(curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 147-14-8, Irgalite Blue BSP 461426-90-4, Kronos 2310  
(curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 403479-94-7, Uvecoat 3000  
(curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 615288-42-1, Worlee Add 902  
(degassing agent; curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 7631-86-9, Silica, uses 72283-68-2, Resiflow PV 5  
(flow improver; curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 947-19-3, Irgacure 184 5495-84-1, Quantacure ITX 121239-75-6, 4-Octyloxyphenylphenyliodonium hexafluoroantimonate 344562-80-7, 4-Isobutylphenyl-p-tolylidonium hexafluorophosphate  
(free radical initiators; curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 106797-53-9, Irgacure 2959 880000-86-2, Irgacure 2020  
(photoinitiator; curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 162881-26-7, Irgacure 819  
(photoinitiator; curing of surface coatings contg. radiation-curable compn. via plasma)
- IT 458563-52-0  
(photolabile base; curing of surface coatings contg. radiation-curable compn. via plasma)

L122 ANSWER 2 OF 3 HCA COPYRIGHT 2008 ACS on STN

AN 135:290242 HCA Full-text

TI Photoactivatable coating composition and its use for the preparation

of coatings with a rapidly processable surface at ambient temperature

IN Klinkenberg, Huig; Noomen, Arie

PA Akzo Nobel N.V., Neth.

SO PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2001072910	A1	20011004	WO 2001-EP3742	200103 27
				<--	
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP	1278804	A1	20030129	EP 2001-931558	200103 27
				<--	
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BR	2001009538	A	20030610	BR 2001-9538	200103 27
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JP	2003528966	T	20030930	JP 2001-571829	200103 27
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US	20020076504	A1	20020620	US 2001-820074	200103 28
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ZA	2002007754	A	20030717	ZA 2002-7754	200209 26

IN 2002CN01554

A

20050128

IN 2002-CN1554

200209

27

PRAI EP 2000-201102

A

20000328

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EP 2000-201968

A

20000606

&lt;--

WO 2001-EP3742

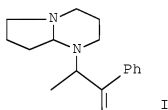
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20010327

&lt;--

OS MARPAT 135:290242

GI



AB A photoactivatable coating compn. comprises (A) an activated unsatd. group-contg. compd., (B) an activated CH group-contg. compd. such as an oligomeric or polymeric malonate compd. and/or an acetoacetate group-contg. compd., (C) a catalyst in the form of one or more Lewis or Broensted bases, with the conjugated acids of the latter having a pKa of at least 10, such as 1,8-diazabicyclo[5.4.0]undec-7-ene, and (D) a photoinitiator, wherein the photoinitiator is a photolatent base. A compn. contained 4-hydroxybutyl acrylate-Vestanat T 1890 adduct, di-Et malonate-1,5-pentanediol copolymer, I, Quantacure BMS, and 1,8-diaza-bicyclo[5,4,0]undec-7-ene.

IT 213465-94-2

(photoactivatable coating compn. and its use for the prepn. of coatings with a rapidly processable surface at ambient temp.)

RN 213465-94-2 HCA

CN Pyrrolo[1,2-a]pyrimidine, octahydro-1-(1-methyl-2-phenyl-2-propen-1-yl)- (CA INDEX NAME)



IC ICM C09D004-06  
 ICS C08F290-06; C09D004-00; C08F222-10; C08G061-12  
 CC 42-10 (Coatings, Inks, and Related Products)  
 ST photocurable coating malonate polymer; Lewis Broensted  
 base photocurable coating; photolatent base  
 photocurable coating  
 IT Coating materials  
 (photocurable; photoactivatable coating compn. and its  
 use for the prepn. of coatings with a rapidly processable surface  
 at ambient temp.)  
 IT 6674-22-2, 1,8-Diazabicyclo-[5,4,0]-undec-7-ene 83846-85-9,  
 Quantacure BMS 213465-94-2  
 (photoactivatable coating compn. and its use for the prepn. of  
 coatings with a rapidly processable surface at ambient temp.)  
 RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L122 ANSWER 3 OF 3 HCA COPYRIGHT 2008 ACS on STN

AN 129:161958 HCA Full-text

TI Manufacture of photoactivatable nitrogen-containing bases based on  
 $\alpha$ -amino ketones as catalysts

IN Hall-Gouille, Veronique; Turner, Sean Colm

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

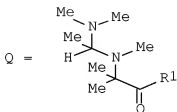
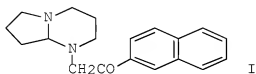
LA English

FAN.CNT 1

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WO 1998-EP95	W	19980109	<--		





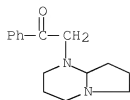
AB The title compds. having a mol. wt. of <1000, useful as photoinitiators for base-catalyzed reactions, e.g., Michael addn. or photopolymer., comprise  $\geq 1$  structural unit Q [R1 = (hetero)arom. radical capable of absorbing light in the wavelength range 200-650 nm]. When exposed to the light, the structure releases an amidine group which is sufficiently basic to initiate the base-catalyzed reactions. Base-polymerizable or crosslinkable compns. comprising compds. having a structural unit Q, a method of implementing photochem. induced, base-catalyzed reactions, and the use of the compds. as photoinitiators for base-catalyzed reactions are also claimed. For example, stirring overnight at ambient temp. a mixt. of  $\beta$ -naphthacyl bromide and 1,5- diaza[4.3.0]bicyclononane in PhMe gave a title base I having UV max (CHCl<sub>3</sub>) at 251, 286 and 345 nm. The latter was used to UV cure a coating comprising a mixt. of an urethane acrylate oligomer (prepn. from 4-hydroxybutyl acrylate and isophorone diisocyanate given) and a malonate polyester (prepn. from di-Et malonate and 1,5-pentanediol given).

IT 211190-64-6P 211190-65-7P 211190-66-8P  
 211190-67-9P 211190-68-0P 211190-69-1P  
 211190-70-4P 211190-72-6P 211190-73-7P  
 211190-74-8P 211190-75-9P 211190-76-0P  
 211190-77-1P 211190-78-2P 211190-79-3P

(manuf. of photoactivatable nitrogen-contg. bases based on  $\alpha$ -amino ketones as catalysts for base-catalyzed reactions)

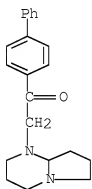
RN 211190-64-6 HCA

CN Ethanone, 2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)-1-phenyl-  
 (CA INDEX NAME)



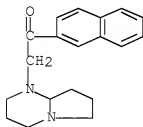
RN 211190-65-7 HCA

CN Ethanone, 1-[1,1'-biphenyl]-4-yl-2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)- (CA INDEX NAME)



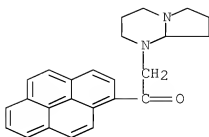
RN 211190-66-8 HCA

CN Ethanone, 2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)-1-(2-naphthalenyl)- (CA INDEX NAME)



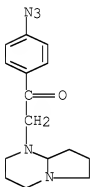
RN 211190-67-9 HCA

CN Ethanone, 2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)-1-(1-pyrenyl)- (CA INDEX NAME)



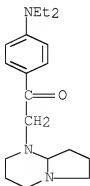
RN 211190-68-0 HCA

CN Ethanone, 1-(4-azidophenyl)-2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)- (CA INDEX NAME)



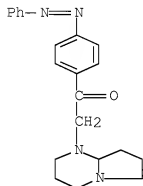
RN 211190-69-1 HCA

CN Ethanone, 1-[4-(diethylamino)phenyl]-2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)- (CA INDEX NAME)



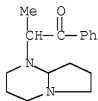
RN 211190-70-4 HCA

CN Ethanone, 2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)-1-[4-(phenylazo)phenyl]- (9CI) (CA INDEX NAME)



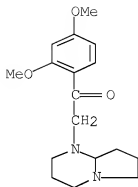
RN 211190-72-6 HCA

CN 1-Propanone, 2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)-1-phenyl- (CA INDEX NAME)



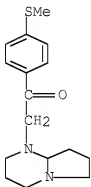
RN 211190-73-7 HCA

CN Ethanone, 1-(2,4-dimethoxyphenyl)-2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)- (CA INDEX NAME)



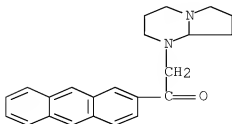
RN 211190-74-8 HCA

CN Ethanone, 2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)-1-[4-(methylthio)phenyl]- (CA INDEX NAME)



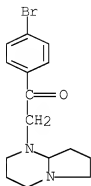
RN 211190-75-9 HCA

CN Ethanone, 1-(2-anthracenyl)-2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)- (CA INDEX NAME)



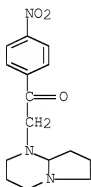
RN 211190-76-0 HCA

CN Ethanone, 1-(4-bromophenyl)-2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)- (CA INDEX NAME)



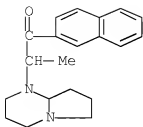
RN 211190-77-1 HCA

CN Ethanone, 2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)-1-(4-nitrophenyl)- (CA INDEX NAME)

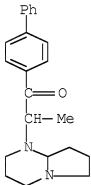


RN 211190-78-2 HCA

CN 1-Propanone, 2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)-1-(2-naphthalenyl)- (CA INDEX NAME)



RN 211190-79-3 HCA  
 CN 1-Propanone, 1-[1,1'-biphenyl]-4-yl-2-(hexahydropyrrolo[1,2-a]pyrimidin-1(2H)-yl)- (CA INDEX NAME)



IC ICM C07D487-04  
 ICS C07D519-00; C07D487-04; C07D239-00; C07D209-00; C07D519-00;  
 C07D487-00; C07D487-00  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 28, 42  
 IT Coating materials  
 (photocurable; manuf. of photoactivatable  
 nitrogen-contg. bases based on  $\alpha$ -amino ketones as catalysts  
 for)  
 IT 211190-64-6P 211190-65-7P 211190-66-8P  
 211190-67-9P 211190-68-0P 211190-69-1P  
 211190-70-4P 211190-71-5P 211190-72-6P  
 211190-73-7P 211190-74-8P 211190-75-9P  
 211190-76-0P 211190-77-1P 211190-78-2P  
 211190-79-3P  
 (manuf. of photoactivatable nitrogen-contg. bases based on

$\alpha$ -amino ketones as catalysts for base-catalyzed reactions)

RE.CNT 1        THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
         ALL CITATIONS AVAILABLE IN THE RE FORMAT

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